

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

**FORM S-1
REGISTRATION STATEMENT**
*UNDER
THE SECURITIES ACT OF 1933*

Gritstone Oncology, Inc.

(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

2836
(Primary Standard Industrial
Classification Code Number)

47-4859534
(I.R.S. Employer
Identification Number)

5858 Horton Street, Suite 210
Emeryville, California 94608
(510) 871-6100

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Andrew Allen, M.D., Ph.D.
President and Chief Executive Officer
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Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer
Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company
Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Proposed maximum aggregate offering price(1)	Amount of registration fee
Common Stock, \$0.0001 par value per share	\$80,000,000	\$9,960

(1) Estimated solely for the purpose of calculating the amount of the registration fee in accordance with Rule 457(o) under the Securities Act of 1933, as amended. Includes the additional shares that the underwriters have the option to purchase from the registrant, if any. See "Underwriting."

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION. DATED AUGUST 23, 2018

Shares



Common Stock

This is an initial public offering of shares of common stock of Gritstone Oncology, Inc. We are offering _____ shares of our common stock.

Prior to this offering, there has been no public market for the common stock. It is currently estimated that the initial public offering price per share will be between \$ _____ and \$ _____.

We have applied to list our common stock on The Nasdaq Global Market under the symbol "GRTS."

We are an "emerging growth company" as defined under the federal securities laws and, as such, have elected to comply with certain reduced public company reporting requirements for this prospectus and may elect to do so in future filings.

Investing in our common stock involves a high degree of risk. See the section titled "Risk Factors" beginning on page 12 to read about factors you should consider before buying shares of our common stock.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities, or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

	Per Share	Total
Initial public offering price	\$ _____	\$ _____
Underwriting discounts(1)	\$ _____	\$ _____
Proceeds, before expenses, to us	\$ _____	\$ _____

(1) See the section titled "Underwriting" for additional information regarding compensation payable to the underwriters.

To the extent that the underwriters sell more than _____ shares of common stock, the underwriters have the option to purchase up to an additional _____ shares from us at the initial public offering price less the underwriting discount.

The underwriters expect to deliver the shares against payment in New York, New York on _____, 2018.

Goldman Sachs & Co. LLC

Cowen

Barclays

BTIG

Prospectus dated _____, 2018

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Through and including _____, 2018 (the 25th day after the date of this prospectus), all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

Neither we nor the underwriters have authorized anyone to provide you with information that is different from that contained in this prospectus or in any free writing prospectus we may authorize to be delivered or made available to you. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the underwriters are offering to sell shares of common stock and seeking offers to buy shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date on the front of this prospectus, or other earlier date stated in this prospectus, regardless of the time of delivery of this prospectus or any sale of shares of our common stock.

No action is being taken in any jurisdiction outside the United States to permit a public offering of our common stock or possession or distribution of this prospectus in that jurisdiction. Persons who come into possession of this prospectus in jurisdictions outside the United States are required to inform themselves about and to observe any restrictions as to this offering and the distribution of this prospectus applicable to that jurisdiction.

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Gritstone Oncology™, Gritstone™, EDGE™, GRANITE™, SLATE™ and our logo are some of our trademarks and service marks used in this prospectus. This prospectus also includes trademarks, tradenames and service marks that are the property of other organizations. Solely for convenience, our trademarks, service marks and tradenames referred to in this prospectus may appear without the ® and ™ symbol, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights, or the right of the applicable licensor to these trademarks, service marks and tradenames.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before deciding to invest in our common stock, you should read this entire prospectus carefully, including the sections of this prospectus titled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our financial statements and related notes contained elsewhere in this prospectus. Some of the statements in this prospectus constitute forward-looking statements that involve risks and uncertainties. See “Special Note Regarding Forward-Looking Statements.” Unless the context otherwise requires or as otherwise noted, references in this prospectus to the “Company,” “Gritstone Oncology,” “Gritstone,” “we,” “us” and “our” refer to Gritstone Oncology, Inc.

Gritstone Oncology, Inc.

Overview

We are an immuno-oncology company developing tumor-specific cancer immunotherapies to fight multiple cancer types. Our goal is to extend the benefits of immunotherapy by leveraging new insights into the immune system’s ability to destroy cancer cells, based on the study of patients treated with checkpoint inhibitors such as anti-PD-(L)1 antibodies. A key hypothesis that has emerged in the field of immuno-oncology is that there are large groups of cancer patients whose tumors have successfully evaded the immune system (so called “cold” tumors) despite having markers that could be recognized by the immune system. Our approach seeks to generate a therapeutic immune response in these patients by unleashing the demonstrated natural power of a patient’s own immune system to recognize short tumor-specific peptide sequences presented on cancer cells, referred to as tumor-specific neoantigens, or TSNA, in order to destroy tumor cells. The importance of TSNA as targets for the immune system was first recognized in 2014 and 2015 in patients treated with checkpoint inhibitors by two of our co-founders, Dr. Timothy Chan and Dr. Naiyer Rizvi. Leveraging these insights, we have built our tumor-specific immunotherapy approach on two key pillars—first, our proprietary Gritstone EDGE™ machine learning-based platform, which gives us a powerful ability to predict from a routine tumor biopsy the TSNA that are presented on a patient’s tumor cells; and second, our ability to develop and manufacture potent immunotherapies utilizing patients’ TSNA to drive the patient’s immune system to attack and destroy tumors. Our tumor-specific immunotherapy portfolio consists of our personalized immunotherapy product candidate, GRANITE-001, which is manufactured uniquely for each patient, and our “off-the-shelf” immunotherapy product candidate series, SLATE, which is designed for selected subsets of patients with common tumor neoantigens.

Our tumor-specific immunotherapy has been tested pre-clinically in non-human primates, the animal model that most closely approximates human immune responses. In this model, we have demonstrated that our immunotherapy elicits potent and sustained T cell responses against delivered antigens. Of particular note, we have shown an ability to effectively prime naïve CD8+ T cells to high levels (comparable to those seen in responders to T cell therapies in clinical studies) against antigens that are new to the recipient’s immune system (a so-called *de novo* primed response)—one of the highest immunologic hurdles in activating T cell responses. Because human tumors (and their TSNA) can successfully evade the immune system, overcoming this hurdle by priming a CD8+ T cell response is a key goal of our immunotherapy approach.

We intend to initiate a first-in-human Phase 1/2 clinical trial of GRANITE-001, our first personalized immunotherapy product candidate, in the second half of 2018, evaluating it in the treatment of common solid tumors, including metastatic non-small cell lung cancer and

gastroesophageal, bladder and colorectal cancers, in each case in combination with checkpoint inhibitors provided by our collaborator, Bristol-Myers Squibb Company, or BMS. The Phase 1 portion of our Phase 1/2 trial will seek to establish a dose for further investigation in Phase 2 and to evaluate safety, tolerability and, importantly, immunogenicity of our product candidate. We will seek to further evaluate efficacy and safety in the Phase 2 cohort expansion portion in several common solid tumor types. Our second tumor-specific product candidate series, SLATE, will utilize the same antigen delivery system as GRANITE-001 but contains a fixed cassette with TSNA that are shared across a subset of cancer patients rather than a cassette unique to an individual patient, providing us with an off-the-shelf alternative to our personalized manufactured product candidate, GRANITE-001. We intend to initiate a Phase 2 clinical trial of SLATE-001, our first off-the-shelf product candidate, in the second half of 2019.

Gritstone EDGE—Our TSNA Prediction Platform

The first pillar of our tumor-specific cancer immunotherapy approach is our understanding of TSNA and the application of our proprietary, artificial intelligence based Gritstone EDGE platform to predict the presence of a patient's unique TSNA on tumor cells. While there are frequently hundreds of mutations in the DNA of a tumor cell, only approximately 1% of these mutations are actually transcribed, translated and processed into a unique "non-self" peptide sequence that is presented on the surface of tumor cells and can be recognized by a patient's own T cells. Furthermore, these rare TSNA are usually unique to each individual patient's tumor. Current technologies cannot predict the presence of TSNA with sufficient accuracy to design a therapy that is likely to be effective. The Gritstone EDGE platform consists of proprietary machine learning models that use DNA/RNA sequence data derived from a patient's tumor biopsy to predict which mutations will generate TSNA most likely to be presented on the tumor cell surface. Applying our EDGE platform to data from human tumors, we have shown a nine-fold improvement in the accuracy of prediction with our platform compared to publicly available approaches. We believe that mutations selected by our EDGE platform have a much higher likelihood of being useful targets for immunization than mutations selected using industry standard methods.

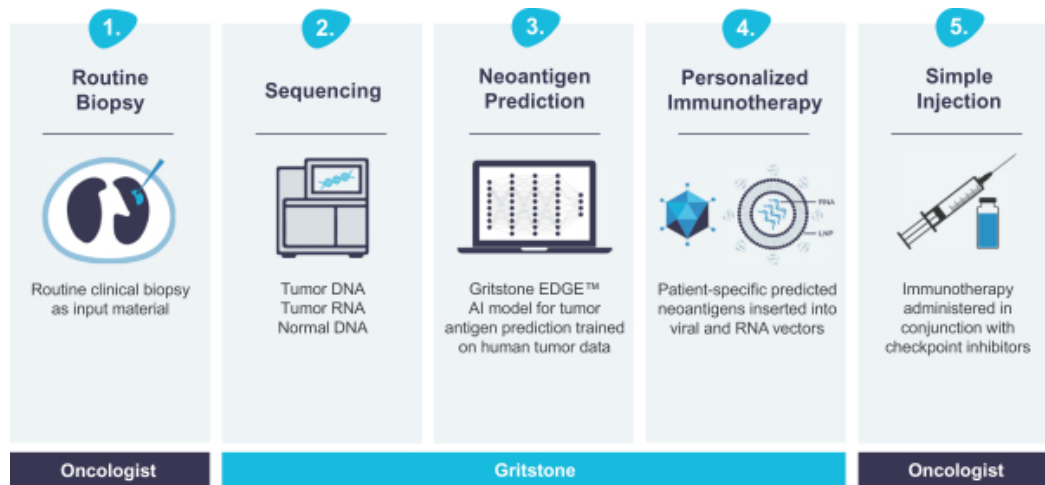
Our Tumor-Specific Neoantigen Therapies

The second pillar of our tumor-specific cancer immunotherapy approach is our ability to develop and manufacture a patient-specific therapeutic to direct a robust T cell response to those TSNA predicted to be presented on the patient's tumor. Each of our immunotherapy product candidates comprise a sequential immunization with a viral prime and RNA boosts delivered by intramuscular injection, which we refer to as our heterologous prime-boost. In our GRANITE-001 product candidate, each of the viral prime and RNA boosts contain a patient-specific set of predicted TSNA, whereas the viral prime and RNA boost in our SLATE product candidate series contains a fixed TSNA cassette that is designed for the subset of patients who carry the relevant neoantigens. Grounded in traditional infectious disease vaccine immunology, and informed by recent successes against pathogens like malaria and Ebola, this two-step immunization utilizes a prime and a boost to educate the patient's T cells to detect TSNA and destroy tumor cells. In non-human primate models, we have demonstrated a profound and specific CD8+ and CD4+ T cell response to antigens administered in this way, CD8+ T cells being the critical cell type for tumor cell killing, and often the hardest response to generate in primates and humans.

Our tumor-specific immunotherapy candidates are intended to fit easily into a community oncology setting and to be administered in earlier lines of treatment, in combination with checkpoint inhibitors to further drive a robust T cell response, rather than only in refractory or relapsed cancers. We have designed our personalized immunotherapy candidate such that oncologists will not have to alter their treatment practices, and we believe that this will extend the utility of our medicines into the community setting and not limit their use to scarce centers of excellence.

Our Personalized Immunotherapy Process (GRANITE-001)

Our personalized immunotherapy process leverages our proprietary EDGE platform to predict the TSNA that will be presented on a patient's tumor, allowing us to create a patient-specific heterologous prime-boost immunotherapy that is designed to elicit a potent anti-tumor T cell response. We believe that our personalized immunotherapy product candidate will have an addressable population of approximately 70-80% of patients with certain common solid tumor types that typically carry large numbers of mutations, such as lung cancer. Our process begins with a routine tumor needle biopsy from the patient. We utilize our in-house sequencing capabilities with the tumor sample and then apply our proprietary EDGE platform to derive a set of predicted TSNA likely to be presented on the patient's tumor. Using these TSNA, we design highly potent personalized immunotherapies containing the relevant neoantigens to be administered by simple intramuscular injection. Our process is outlined in the figure below.

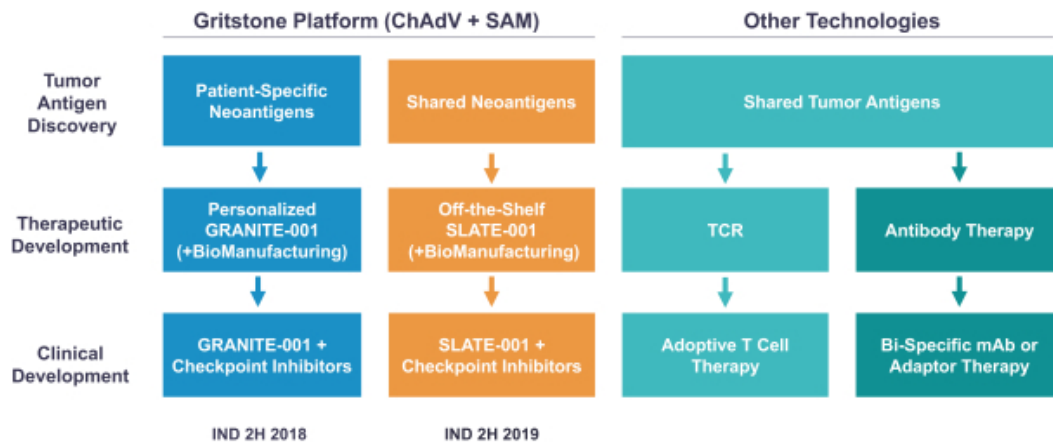


Our EDGE Antigen Identification Engine to Design Off-The-Shelf Neoantigen-Directed Products

While many patients with solid tumors may carry multiple TSNA unique to that patient, it has been shown that a minority of patients will carry a TSNA that is shared with other patients. The presence of these shared TSNA is likely to occur when a functionally important mutation (termed a driver mutation), which is recurrently observed across different patients, carries the potential to be processed and presented by the tumor cell as a neoantigen. Early analyses suggest that while each such shared neoantigen may only be found on less than 2% of patients with a particular tumor type, our heterologous prime-boost system can deliver at least 20 of these TSNA, which we believe will result in the off-the-shelf product candidate having an addressable population of approximately 10-15% of patients within common solid tumor types such as colorectal cancer and lung cancer. Our off-the-shelf product candidates are expected to be specific to a particular tumor type, and the TSNA module is fixed for each product. As a result, the essential aspect to the utilization of the off-the-shelf-product candidate is the ability to accurately identify patients whose tumors contain one of the TSNA represented within the off-the-shelf product candidate. The routine screening of patients' tumors using commercially-available genomic screens, together with identification of the patient's HLA type from blood with a standard clinical assay, enables identification of such patients.

Our EDGE Antigen Identification Engine—Beyond Tumor-Specific Neoantigens

Beyond TSNA-directed therapeutics, we are leveraging our expertise in cancer genomics and our tumor antigen discovery platform to identify novel peptide sequences (not mutated) that may be shared across common tumor types (shared tumor antigens), which we believe are likely to have value as targets to direct T cells onto tumors specifically. Shared tumor antigen targets enable us to opportunistically partner or develop additional therapeutic approaches to redirect T cells onto tumors using these highly specific targets. These approaches include (1) “off-the-shelf” shared tumor antigens in our heterologous prime-boost platform, (2) modifying the receptors of the patient’s own T cells to help them recognize tumor targets (adoptive T cell therapy), and (3) using small adapter proteins that have two recognition arms—one for tumors and one for T cells (bispecific antibodies), as shown in the figure below. In August 2018, we announced our collaboration supporting this strategy with bluebird bio, Inc., or bluebird bio, whereby we will identify up to ten tumor-specific targets and associated T cell receptors for therapeutic application within bluebird bio’s cell therapy platform.



Our Team and Investors

To deliver on the promise of our novel therapeutic approach, we have assembled a highly experienced management team with focused expertise in each of our core disciplines of cancer genomics, immunology and vaccinology, clinical and regulatory development and biomanufacturing from several leading biotechnology companies, including Clovis Oncology, Inc., Pfizer Inc., Genentech, Inc. and Foundation Medicine, Inc. Our co-founder Dr. Andrew Allen brings experience as a co-founder and Chief Medical Officer of Clovis Oncology, Inc., with prior experience in various leadership roles at Pharmion Corporation and Chiron Corporation, where he worked on Proleukin (IL-2), the first cancer immunotherapy. The scientific advisory board includes selected experts in relevant disciplines, including Dr. Timothy Chan (Memorial Sloan Kettering Cancer Center) and Dr. Naiyer Rizvi (Columbia University Medical Center), who together first demonstrated that TSNA are key T cell targets in cancer patients responding to checkpoint inhibitor therapy, as well as Dr. James Gulley (National Cancer Institute), who is an international expert in cancer immunotherapy with a focus on vaccines.

We are further supported by a group of leading institutional investors, including Versant Ventures, The Column Group, Clarus, Frazier Healthcare Partners, Lilly Asia Ventures, GV, Redmile Group and Casdin Capital.

Our Strategy

Our goal is to eradicate cancer by initially developing personalized immunotherapies that focus on the unique and individual nature of a patient's tumor. Our strategy to achieve this includes the following key components:

- **Rapidly advance GRANITE-001, our lead product candidate, in multiple clinical settings, with the objective of generating a significant CD8+ T cell response to tumor-specific neoantigens.** GRANITE-001 is our first personalized immunotherapy product candidate. It is engineered to elicit a significant T cell response to selected antigens in humans (particularly CD8+ T cell responses) based upon extensive clinical experience with many different vectors in the realm of infectious disease. We have submitted our Investigational New Drug application, or IND, for GRANITE-001 and we intend to initiate a first-in-human Phase 1/2 trial of our heterologous prime-boost regimen in combination with checkpoint inhibitors provided by our collaborator BMS in the second half of 2018.
- **Invest in our Gritstone EDGE platform and maximize its utility across modalities.** The EDGE platform utilizes proprietary machine learning models and an extensive dataset of over a million HLA-presented peptides from over 300 human tumor and matched normal tissue specimens. We are initially applying the platform to develop multiple formats of personalized cancer immunotherapies—including our heterologous prime-boost immunization containing TSNA (our lead program) as well as “off-the-shelf” therapies targeting shared tumor-specific antigens—in order to maximize the utility of our prediction capabilities across modalities. We intend to continually make investments to improve the EDGE platform's prediction capabilities in order to develop more efficacious medicines. Genomic and immune response data from our clinical trials will serve to further validate and refine our machine learning platform.
- **Build upon the discoveries from our Gritstone EDGE platform to rapidly move SLATE-001, our shared-TSNA product candidate, into multiple clinical settings where shared neoantigens may have utility.** This includes—but will not be limited to—KRAS-driven tumors such as colorectal cancer, pancreatic ductal carcinoma and adenocarcinomas of the lung. We plan to submit an IND for SLATE-001 in the second half of 2019, and start Phase 2 clinical trials if and when data from GRANITE-001 have confirmed acceptable safety and immunogenicity of our prime-boost vaccine platform, together with Phase 2 dosing recommendations.
- **Continue to build our in-house manufacturing capabilities to maintain the highest controls on quality and capacity.** We believe the speed, quality, reliability and scalability of our manufacturing capabilities will be a core competitive advantage to our clinical development and commercial success. We intend to internalize the majority of the manufacturing steps to drive down both cost and production time, as well as establish full control over intellectual property and product quality. We believe that operating our own manufacturing facility will provide us with enhanced control of material supply for both clinical trials and the commercial market, will enable the more rapid implementation of process changes, and will allow for better long-term margins.
- **Move tumor-specific immunotherapy into community oncology settings and earlier lines of treatment.** We are designing our tumor-specific immunotherapy product candidates to fit into a community oncology setting. This approach is designed to enable oncologists to integrate our tumor-specific immunotherapy product candidates into their treatment practices without requiring a change in the current treatment paradigm. We believe this strategy has the potential to extend the use of our medicines into the community setting, enabling rapid trial execution, and expanding commercial use beyond limited centers of research excellence.

Additionally, we intend to develop our tumor-specific immunotherapy product candidates in earlier lines of treatment, where recent clinical data with other forms of immunotherapy suggest efficacy is likely to be stronger, versus being used in highly refractory or late-stage cancer patients.

- **Enter into collaborations to realize the full potential of our platform.** The breadth of our EDGE platform enables its application to a variety of therapeutic formats, including cell therapy, bispecific antibodies and other areas where shared tumor antigens could be impactful to cancer treatment. We intend to form collaborations around certain aspects of our platform, such as shared tumor antigens, as we believe we will benefit from the resources and capabilities of other organizations in the manufacture, development and commercialization of such diverse immunotherapies. Aligned with this strategy, our strategic collaboration with bluebird bio involves use of our EDGE platform to identify tumor-specific targets and associated T cell receptors for clinical application within bluebird bio's cell therapy platform.

Risks Associated with Our Business

Our ability to implement our business strategy is subject to numerous risks that you should be aware of before making an investment decision. These risks are described more fully in the section titled "Risk Factors," immediately following this prospectus summary. These risks include the following, among others:

- We are an early-stage biopharmaceutical company with a limited operating history and no products approved for commercial sale. We have incurred significant losses since our inception, and we anticipate that we will continue to incur significant losses for the foreseeable future, which, together with our limited operating history, makes it difficult to assess our future viability.
- We will require substantial additional financing to achieve our goals, and a failure to obtain this necessary capital when needed on acceptable terms, or at all, could force us to delay, limit, reduce or terminate our product development programs, commercialization efforts or other operations.
- Our tumor-specific cancer immunotherapy approach is based on novel ideas and technologies that are unproven and may not result in marketable products, which exposes us to unforeseen risks and makes it difficult for us to predict the time and cost of product development and potential for regulatory approval.
- Our business is dependent on the successful development, regulatory approval and commercialization of our personalized immunotherapy product candidate, GRANITE-001, which is in early stages of development and has not been tested in humans.
- We may be unable to obtain regulatory approval for our tumor-specific immunotherapy product candidates under applicable regulatory requirements. The denial or delay of any such approval would delay commercialization of our product candidates and adversely impact our potential to generate revenue, our business and our results of operations.
- Clinical development involves a lengthy and expensive process with an uncertain outcome, and delays can occur for a variety of reasons outside of our control.
- We rely on third parties in the conduct of all of our preclinical studies and intend to rely on third parties in the conduct of all of our future clinical trials. If these third parties do not successfully carry out their contractual duties, fail to comply with applicable regulatory requirements or meet

expected deadlines, we may be unable to obtain regulatory approval for our tumor-specific immunotherapy product candidates.

- Our success depends on our ability to protect our intellectual property and our proprietary technologies.

Corporate Information

We were founded in August 2015 as a Delaware corporation. Our principal executive offices are located at 5858 Horton Street, Suite 210, Emeryville, California 94608, and our telephone number is (510) 871-6100. Our website address is www.gritstoneoncology.com. The information on, or that can be accessed through, our website is not part of this prospectus and is not incorporated by reference herein. We have included our website address as an inactive textual reference only.

Implications of Being An Emerging Growth Company

We are an emerging growth company as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. We will remain an emerging growth company until the earliest of (1) the last day of the fiscal year following the fifth anniversary of the consummation of this offering, (2) the last day of the fiscal year in which we have total annual gross revenue of at least \$1.07 billion, (3) the last day of the fiscal year in which we are deemed to be a "large accelerated filer" as defined in Rule 12b-2 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, which would occur if the market value of our common stock held by non-affiliates exceeded \$700.0 million as of the last business day of the second fiscal quarter of such year or (4) the date on which we have issued more than \$1.0 billion in non-convertible debt securities during the prior three-year period. An emerging growth company may take advantage of specified reduced reporting requirements and is relieved of certain other significant requirements that are otherwise generally applicable to public companies. As an emerging growth company:

- We will present in this prospectus only two years of audited financial statements, plus unaudited condensed financial statements for any interim period, and related management's discussion and analysis of financial condition and results of operations;
- We will avail ourselves of the exemption from the requirement to obtain an attestation and report from our auditors on the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act of 2002;
- We will provide less extensive disclosure about our executive compensation arrangements; and
- We will not require stockholder non-binding advisory votes on executive compensation or golden parachute arrangements.

THE OFFERING

Common stock offered by us	shares.
Underwriters' option to purchase additional shares from us	We have granted the underwriters a 30-day option to purchase up to additional shares at the initial public offering price, less underwriting discounts and commissions.
Common stock to be outstanding immediately after this offering	shares (or shares if the underwriters exercise in full their option to purchase additional shares).
Use of proceeds	<p>We estimate that the net proceeds from this offering will be approximately \$ million, or approximately \$ million if the underwriters exercise their option to purchase additional shares in full, at an assumed initial public offering price of \$ per share, the midpoint of the range set forth on the cover of this prospectus, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.</p> <p>We currently expect to use the net proceeds from this offering to fund our planned Phase 1/2 clinical trial of GRANITE-001, continued buildout of our manufacturing facility, internal research and development activities, including preclinical and IND-enabling activities for SLATE-001, and for working capital and general corporate purposes. See "Use of Proceeds" on page 72 for a more complete description of the intended use of proceeds from this offering.</p>
Risk factors	See "Risk Factors" beginning on page 12 and other information included in this prospectus for a discussion of factors that you should consider carefully before deciding to invest in our common stock.
Proposed The Nasdaq Global Market symbol	"GRTS"

The number of shares of common stock to be outstanding after this offering is based on 152,917,581 shares of common stock outstanding as of August 20, 2018 and includes an aggregate of 133,923,424 shares of common stock issuable upon conversion of our outstanding convertible preferred stock, and excludes the following:

- 16,395,414 shares of common stock issuable upon the exercise of outstanding stock options as of August 20, 2018 having a weighted-average exercise price of \$0.57 per share;
- 640,429 shares of common stock reserved for issuance pursuant to future awards under our 2015 Equity Incentive Plan, as amended, as of August 20, 2018, which will become available for issuance under our 2018 Incentive Award Plan after the consummation of this offering;

- shares of common stock reserved for issuance pursuant to future awards under our 2018 Incentive Award Plan, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan, which will become effective on the day prior to the first public trading date of our common stock; and
- shares of common stock reserved for issuance under our 2018 Employee Stock Purchase Plan, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan, which will become effective on the day prior to the first public trading date of our common stock.

In addition, unless we specifically state otherwise, all information in this prospectus reflects and assumes the following:

- a -for- reverse stock split of our common stock and convertible preferred stock to be effected prior to the effectiveness of the registration statement of which this prospectus is a part;
- the automatic conversion of all shares of our outstanding convertible preferred stock at August 20, 2018 into an aggregate of 133,923,424 shares of common stock immediately prior to the consummation of this offering;
- the filing and effectiveness of our amended and restated certificate of incorporation in Delaware and the adoption of our amended and restated bylaws, each of which will occur immediately prior to the consummation of this offering;
- no exercise of outstanding stock options subsequent to August 20, 2018; and
- no exercise of the underwriters' option to purchase up to an additional shares of common stock.

Unless otherwise specified and unless the context otherwise requires, we refer to our Series A, Series B and Series C convertible preferred stock collectively as "convertible preferred stock" in this prospectus, as well as for financial reporting purposes and in the financial tables included in this prospectus, as more fully explained in Note 9 to our audited financial statements and Note 8 to our unaudited interim condensed financial statements included in this prospectus.

Summary Financial Data

The following tables present our selected financial data for the periods and as of the dates indicated. We have derived the following summary statements of operations and comprehensive loss data for the years ended December 31, 2016 and 2017, and the balance sheet data as of December 31, 2016 and 2017, from our audited financial statements and related notes included elsewhere in this prospectus. We have derived the summary statements of operations and comprehensive loss data for the six months ended June 30, 2017 and 2018, and the balance sheet data as of June 30, 2018, from our unaudited interim condensed financial statements and notes included elsewhere in this prospectus. The unaudited interim condensed financial statements have been prepared in accordance with accounting principles generally accepted in the United States and on the same basis as the audited financial statements and reflect, in the opinion of management, all adjustments, which include only normal, recurring adjustments that are necessary for the fair presentation of the financial information in those statements. Our historical results are not necessarily indicative of the results that may be expected in the future, and the results for the six months ended June 30, 2018, are not necessarily indicative of results to be expected for the full year or any other period. You should read the financial data below in conjunction with our financial statements and related notes included elsewhere in this prospectus and the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Year Ended December 31,		Six Months Ended June 30,	
	2016	2017	2017	2018
(in thousands, except share and per share data)				
Statements of Operations and Comprehensive Loss Data:				
Operating Expenses:				
Research and development	\$ 13,916	\$ 35,691	\$ 11,855	\$ 24,090
General and administrative	5,064	6,072	2,840	4,852
Total operating expenses	<u>18,980</u>	<u>41,763</u>	<u>14,695</u>	<u>28,942</u>
Loss from operations	(18,980)	(41,763)	(14,695)	(28,942)
Interest income, net	230	386	138	94
Net loss	(18,750)	(41,377)	(14,557)	(28,848)
Unrealized loss on marketable securities	(2)	(71)	(2)	(31)
Other comprehensive loss	<u>\$ (18,752)</u>	<u>\$ (41,448)</u>	<u>\$ (14,559)</u>	<u>\$ (28,879)</u>
Net loss per share, basic and diluted(1)	<u>\$ (1.62)</u>	<u>\$ (3.00)</u>	<u>\$ (1.11)</u>	<u>\$ (1.83)</u>
Weighted-average number of shares outstanding, basic and diluted(1)	<u>11,540,581</u>	<u>13,793,417</u>	<u>13,156,419</u>	<u>15,772,769</u>
Pro forma net loss per share, basic and diluted(1)		<u>\$ (0.44)</u>		<u>\$ (0.21)</u>
Pro forma weighted-average number of shares outstanding, basic and diluted(1)		<u>94,529,860</u>		<u>138,628,706</u>

(1) See Notes 2 and 12 to our audited financial statements, and Notes 2 and 10 to our unaudited interim condensed financial statements, included elsewhere in this prospectus for further details on the calculations of our basic and diluted net loss per share, basic and diluted pro forma net loss per share and the weighted-average number of shares used in the computation of the per share amounts.

The table below presents our balance sheet data as of June 30, 2018:

- on an actual basis;
- on a pro forma basis to give effect to: (i) our issuance and sale during July and August 2018 of an aggregate of 6,358,201 shares of our Series C convertible preferred stock for cash consideration of \$12.0 million, which includes 5,300,000 shares that bluebird bio purchased for cash consideration of approximately \$10.0 million in connection with our strategic collaboration; (ii) the automatic conversion of all shares of our convertible preferred stock outstanding at June 30, 2018, together with the shares of Series C convertible preferred stock we issued during July and August 2018, into an aggregate of 133,923,424 shares of our common stock, which will be effective immediately prior to the consummation of this offering; and (iii) the filing and effectiveness of our amended and restated certificate of incorporation, which will occur immediately prior to the consummation of this offering; and
- on a pro forma as adjusted basis to give further effect to the sale of _____ shares of common stock in this offering at an assumed initial public offering price of \$ _____ per share, the midpoint of the range set forth on the cover of this prospectus, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

	As of June 30, 2018		
	Actual	Pro Forma (unaudited) (in thousands)	Pro Forma As Adjusted(1)

Balance Sheet Data:

Cash, cash equivalents and marketable securities	\$ 64,490	\$ 76,490	\$
Working capital(2)	61,697	73,697	
Total assets	95,951	107,951	
Convertible preferred stock	165,865	—	
Accumulated deficit	(90,475)	(90,475)	
Total stockholders' equity	78,672	90,672	

- (1) Each \$1.00 increase (decrease) in the assumed initial public offering price of \$ _____ per share (the midpoint of the range set forth on the cover of this prospectus), would increase (decrease) the amount of each of cash, cash equivalents and marketable securities, working capital, total assets and total stockholders' equity by \$ _____ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the underwriting discount and commissions and estimated offering expenses payable by us. We may also increase (decrease) the number of shares we are offering. Each increase (decrease) of 1,000,000 in the number of shares we are offering would increase (decrease) the amount of each of cash, cash equivalents and marketable securities, working capital, total assets and total stockholders' equity by approximately \$ _____ million, assuming the assumed initial public offering price of \$ _____ per share (the midpoint of the range set forth on the cover of this prospectus), remains the same and after deducting the underwriting discount and commissions and estimated offering expenses payable by us. The pro forma as adjusted information is illustrative only and we will adjust this information based on the actual initial public offering price and other terms of this offering determined at pricing.
- (2) We define working capital as current assets less current liabilities. See our audited financial statements and unaudited interim condensed financial statements and related notes included elsewhere in this prospectus for details regarding our current assets and current liabilities.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this prospectus, including our financial statements and the related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations," before deciding whether to invest in our common stock. The occurrence of any of the events or developments described below could have a material adverse effect on our business, results of operations, financial condition, prospects and stock price. In such an event, the market price of our common stock could decline, and you may lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations.

Risks Related to Our Limited Operating History, Financial Condition and Capital Requirements

We are an early-stage biopharmaceutical company with a limited operating history and no products approved for commercial sale. We have incurred significant losses since our inception, and we anticipate that we will continue to incur significant losses for the foreseeable future, which, together with our limited operating history, makes it difficult to assess our future viability.

Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of risk. We are an early-stage biopharmaceutical company, and we have only a limited operating history upon which you can evaluate our business and prospects. We have no products approved for commercial sale, have not generated any revenue from product sales and have incurred losses in each year since our inception in August 2015. In addition, we have limited experience and have not yet demonstrated an ability to successfully overcome many of the risks and uncertainties frequently encountered by companies in new and rapidly evolving fields, particularly in the biopharmaceutical industry. We have only recently submitted our IND of our first personalized cancer immunotherapy candidate, GRANITE-001, and have not yet initiated any clinical trials.

We have had significant operating losses since our inception. Our net losses for the years ended December 31, 2016 and 2017 were approximately \$18.8 million and \$41.4 million, respectively, and for the six months ended June 30, 2017 and 2018 were approximately \$14.6 million and \$28.8 million, respectively. As of June 30, 2018, we had an accumulated deficit of \$90.5 million. Substantially all of our losses have resulted from expenses incurred in connection with our research and development programs and from general and administrative costs associated with our operations. GRANITE-001 will require substantial additional development time and resources before we would be able to apply for or receive regulatory approvals and begin generating revenue from product sales. In addition, upon the completion of this offering we expect to incur additional costs associated with operating as a public company. We also do not yet have a sales organization or commercial infrastructure and, accordingly, we will incur significant expenses to develop a sales organization or commercial infrastructure in advance of generating any commercial product sales. We expect to continue to incur losses for the foreseeable future, and we anticipate these losses will increase as we continue to develop GRANITE-001, SLATE-001 and any future product candidates, conduct clinical trials and pursue research and development activities. Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods. Our prior losses, combined with expected future losses, have had and will continue to have an adverse effect on our stockholders' equity and working capital.

We will require substantial additional financing to achieve our goals, and a failure to obtain this necessary capital when needed on acceptable terms, or at all, could force us to delay, limit, reduce or terminate our product development programs, commercialization efforts or other operations.

Since our inception, we have invested a significant portion of our efforts and financial resources in research and development activities for tumor-specific cancer immunotherapies, and working to establish our in-house manufacturing capabilities. Preclinical studies and clinical trials and additional research and development activities will require substantial funds to complete. As of June 30, 2018, we had capital resources consisting of cash, cash equivalents and marketable securities of \$64.5 million. We believe that we will continue to expend substantial resources for the foreseeable future in connection with the development of GRANITE-001, SLATE-001 and any other future cancer immunotherapy candidates we may choose to pursue, as well as the continued development of our manufacturing capabilities and other corporate uses. Specifically, in the near term, we expect to incur substantial expenses as we advance GRANITE-001 and SLATE-001 through clinical development, seek regulatory approval, prepare for and, if approved, proceed to commercialization, continue our research and development efforts and invest in our manufacturing facility. These expenditures will include costs associated with conducting preclinical studies and clinical trials, obtaining regulatory approvals, and manufacturing and supply, as well as marketing and selling any products approved for sale. In addition, other unanticipated costs may arise. Because the outcome of any preclinical study or clinical trial is highly uncertain, we cannot reasonably estimate the actual amounts necessary to successfully complete the development and commercialization of GRANITE-001, SLATE-001 or any future immunotherapy product candidates.

We believe that the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, will allow us to fund our operating plan for at least _____ months following the date of this offering. However, our operating plans and other demands on our capital resources may change as a result of many factors currently unknown to us, and we may need to seek additional funds sooner than planned, through public or private equity or debt financings or other sources, such as strategic collaborations. Such financing may result in dilution to stockholders, imposition of burdensome debt covenants and repayment obligations, or other restrictions that may affect our business. If we raise additional funds through licensing or collaboration arrangements with third parties, we may have to relinquish valuable rights to our product candidates, or grant licenses on terms that are not favorable to us. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. Attempting to secure additional financing may divert our management from our day-to-day activities, which may adversely affect our ability to develop our product candidates. In addition, we cannot guarantee that future financing will be available in sufficient amounts or on terms acceptable to us, if at all.

Our future capital requirements depend on many factors, including:

- the scope, progress, results and costs of developing our tumor-specific immunotherapy product candidates, and conducting preclinical studies and clinical trials, including our planned Phase 1/2 clinical trial for GRANITE-001, which we expect to initiate in the second half of 2018;
- the scope, progress, results and costs of conducting studies and clinical trials for our SLATE product candidate series, including the Phase 2 clinical trial for SLATE-001, which we expect to initiate in the second half of 2019;
- the timing of, and the costs involved in, obtaining regulatory approvals for our tumor-specific immunotherapy candidates;
- the number and characteristics of any additional product candidates we develop or acquire;

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- the timing and amount of any milestone, royalty or other payments we are required to make pursuant to any current or future collaboration or license agreement;
- the cost of manufacturing our tumor-specific immunotherapies we successfully commercialize, including the cost of scaling up our internal manufacturing operations;
- the cost of building a sales force in anticipation of product commercialization;
- the cost of commercialization activities, including marketing, sales and distribution costs;
- our ability to maintain existing, and establish new, strategic collaborations, licensing or other arrangements and the financial terms of any such agreements, including the timing and amount of any future milestone, royalty or other payments due under any such agreement;
- any product liability or other lawsuits related to our products;
- the expenses needed to attract, hire and retain skilled personnel;
- the costs associated with being a public company;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing our intellectual property portfolio; and
- the timing, receipt and amount of sales of any future approved products, if any.

Additional funds may not be available when we need them, on terms that are acceptable to us, or at all. If adequate funds are not available to us on a timely basis, we may be required to:

- delay, limit, reduce or terminate preclinical studies, clinical trials or other research and development activities or eliminate one or more of our development programs altogether; or
- delay, limit, reduce or terminate our efforts to establish manufacturing and sales and marketing capabilities or other activities that may be necessary to commercialize our tumor-specific immunotherapy candidates, or reduce our flexibility in developing or maintaining our sales and marketing strategy.

We also could be required to seek funds through arrangements with collaborators or others that may require us to relinquish rights or jointly own some aspects of our technologies or product candidates that we would otherwise pursue on our own. We do not expect to realize revenue from sales of products or royalties from licensed products in the foreseeable future, if at all, and unless and until a product candidate is clinically tested, approved for commercialization and successfully marketed. To date, we have primarily financed our operations through the sale of equity securities. We will be required to seek additional funding in the future and currently intend to do so through collaborations, public or private equity offerings or debt financings, credit or loan facilities or a combination of one or more of these funding sources. Our ability to raise additional funds will depend on financial, economic and other factors, many of which are beyond our control. Additional funds may not be available to us on acceptable terms or at all. If we raise additional funds by issuing equity securities, our stockholders will suffer dilution and the terms of any financing may adversely affect the rights of our stockholders. In addition, as a condition to providing additional funds to us, future investors may demand, and may be granted, rights superior to those of existing stockholders. Debt financing, if available, is likely to involve restrictive covenants limiting our flexibility in conducting future business activities, and, in the event of insolvency, debt holders would be repaid before holders of our equity securities received any distribution of our corporate assets.

Our recurring losses from operations and negative cash flows have raised substantial doubt regarding our ability to continue as a going concern.

Our recurring losses from operations and negative cash flows raise substantial doubt about our ability to continue as a going concern. As a result, our independent registered public accounting firm

included an explanatory paragraph in its report on our financial statements as of, and for the year ended, December 31, 2017. Our ability to continue as a going concern will require us to obtain additional financing to fund our operations. The perception of our ability to continue as a going concern may make it more difficult for us to obtain financing for the continuation of our operations and could result in the loss of confidence by investors, contract manufacturers and employees.

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations.

Our quarterly and annual operating results may fluctuate significantly, which makes it difficult for us to predict our future operating results. These fluctuations may occur due to a variety of factors, many of which are outside of our control and may be difficult to predict, including:

- the timing and cost of, and level of investment in, research, development and commercialization activities, which may change from time to time;
- the timing of receipt of approvals from regulatory authorities in the United States and internationally;
- the timing and status of enrollment for our clinical trials;
- the cost of manufacturing, as well as building out our supply chain, which may vary depending on the quantity of production, the cost of continuing to establish and scale up our internal manufacturing capabilities, and the terms of any agreements we enter into with third-party suppliers;
- timing and amount of any milestone, royalty or other payments due under any current or future collaboration or license agreement;
- coverage and reimbursement policies with respect to our tumor-specific immunotherapy product candidates, if approved, and potential future drugs that compete with our products;
- expenditures that we may incur to acquire, develop or commercialize additional products and technologies;
- the level of demand for our cancer immunotherapy products, if approved, which may vary significantly over time;
- future accounting pronouncements or changes in our accounting policies; and
- the timing and success or failure of preclinical studies and clinical trials for our product candidates or competing product candidates, or any other change in the competitive landscape of our industry, including consolidation among our competitors or partners.

The cumulative effects of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance.

This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated revenue or earnings guidance we may provide.

Risks Related to Our Business

Our business is dependent on the successful development, regulatory approval and commercialization of our personalized immunotherapy product candidate, GRANITE-001, which is in the early stages of development and has not been tested in humans.

We have no products approved for sale and our initial product candidate, GRANITE-001, a personalized immunotherapy, which we have only recently submitted an IND for, has not been tested in humans. As such, we face significant translational risk with GRANITE-001 specifically and our tumor-specific immunotherapy approach generally. The success of our business, including our ability to finance our company and generate any revenue in the future, will primarily depend on the successful development, regulatory approval and commercialization of GRANITE-001, as well as other product candidates derived from our tumor-specific immunotherapy approach, which may never occur. In the future, we may also become dependent on other product candidates that we may develop or acquire; however, no product candidates based on our tumor-specific immunotherapy approach have been tested in humans and given our early stage of development, it may be many years, if at all, before we have demonstrated the safety and efficacy of a personalized immunotherapy treatment sufficient to warrant approval for commercialization.

We have not previously submitted a biologics license application, or BLA, to the U.S. Food and Drug Administration, or FDA, or similar regulatory approval filings to comparable foreign authorities, for any product candidate, and we cannot be certain that our product candidates will be successful in clinical trials or receive regulatory approval. Further, GRANITE-001, SLATE-001 or any future product candidates may not receive regulatory approval even if they are successful in clinical trials. If we do not receive regulatory approvals for our product candidates, we may not be able to continue our operations. Even if we successfully obtain regulatory approvals to market a product candidate, our revenue will be dependent, in part, upon the size of the markets in the territories for which we gain regulatory approval and have commercial rights. If the markets or patient subsets that we are targeting are not as significant as we estimate, we may not generate significant revenues from sales of such products, if approved.

We plan to seek regulatory approval to commercialize our product candidates both in the United States and in selected foreign countries. While the scope of regulatory approval generally is similar in other countries, in order to obtain separate regulatory approval in other countries we must comply with numerous and varying regulatory requirements of such countries regarding safety and efficacy. Other countries also have their own regulations governing, among other things, clinical trials and commercial sales, as well as pricing and distribution of our product candidates, and we may be required to expend significant resources to obtain regulatory approval and to comply with ongoing regulations in these jurisdictions.

The clinical and commercial success of our current and any future product candidates will depend on a number of factors, including the following:

- our ability to raise any additional required capital on acceptable terms, or at all;
- our ability to complete IND-enabling studies and successfully submit an IND;
- timely completion of our preclinical studies and clinical trials, which may be significantly slower or cost more than we currently anticipate and will depend substantially upon the performance of third-party contractors;
- whether we are required by the FDA or similar foreign regulatory agencies to conduct additional clinical trials or other studies beyond those planned to support approval of our product candidates;

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- acceptance of our proposed indications and primary endpoint assessments relating to the proposed indications of our product candidates by the FDA and similar foreign regulatory authorities;
- our ability to consistently manufacture on a timely basis our personalized immunotherapy candidates;
- our ability, and the ability of any third parties with whom we contract, to remain in good standing with regulatory agencies and develop, validate and maintain commercially viable manufacturing processes that are compliant with current good manufacturing practices, or cGMPs;
- our ability to demonstrate to the satisfaction of the FDA and similar foreign regulatory authorities the safety, efficacy and acceptable risk-benefit profile of our product candidates;
- the prevalence, duration and severity of potential side effects or other safety issues experienced with our product candidates or future approved products, if any;
- the timely receipt of necessary marketing approvals from the FDA and similar foreign regulatory authorities;
- achieving and maintaining, and, where applicable, ensuring that our third-party contractors achieve and maintain, compliance with our contractual obligations and with all regulatory requirements applicable to our lead product candidate or any future product candidates or approved products, if any;
- the willingness of physicians, operators of hospitals and clinics and patients to utilize or adopt our personalized cancer immunotherapy approach;
- our ability to successfully develop a commercial strategy and thereafter commercialize GRANITE-001, SLATE-001 or any future product candidates in the United States and internationally, if approved for marketing, sale and distribution in such countries and territories, whether alone or in collaboration with others;
- the availability of coverage and adequate reimbursement from managed care plans, private insurers, government payors (such as Medicare and Medicaid) and other third-party payors for any of our product candidates that may be approved;
- the convenience of our treatment or dosing regimen;
- acceptance by physicians, payors and patients of the benefits, safety and efficacy of our product candidate or any future product candidates, if approved, including relative to alternative and competing treatments;
- patient demand for our current or future product candidates, if approved;
- our ability to establish and enforce intellectual property rights in and to our product candidates; and
- our ability to avoid third-party patent interference, intellectual property challenges or intellectual property infringement claims.

These factors, many of which are beyond our control, could cause us to experience significant delays or an inability to obtain regulatory approvals or commercialize our current or future product candidates. Even if regulatory approvals are obtained, we may never be able to successfully commercialize any product candidates. Accordingly, we cannot provide assurances that we will be able to generate sufficient revenue through the sale of our product candidate or any future product candidates to continue our business or achieve profitability.

Our tumor-specific cancer immunotherapy approach is based on novel ideas and technologies that are unproven and may not result in marketable products, which exposes us to unforeseen risks and makes it difficult for us to predict the time and cost of product development and potential for regulatory approval.

We are using our proprietary EDGE tumor-antigen prediction platform to develop tumor-specific immunotherapy product candidates to treat cancer. Our foundational science and product development approach are based on our ability to predict the presence of a patient's tumor-specific neoantigens, or TSNA, and develop a TSNA-directed therapy that will elicit a meaningful T cell response. We believe that this approach may offer an improved therapeutic effect by driving an intense, focused T cell attack selectively upon a patient's tumor. However, this approach to treating cancer is novel and the scientific research that forms the basis of our efforts to predict the presence of TSNA and to develop TSNA-directed cancer immunotherapy candidates is both preliminary and limited. Neither of our tumor-specific immunotherapy product candidates have been tested in humans, and the results of our preclinical animal studies may not translate into humans. For example, our prediction model may fail to accurately predict the presence of TSNA, resulting in little or no T cell activity, or our therapy may fail to elicit a significant or durable enough T cell response to effectively destroy a tumor. As such, we cannot assure you that that even if we are able to develop personalized cancer immunotherapy candidates capable of recognizing TSNA and eliciting a T cell response, that such therapy would safely and effectively treat cancers. We may spend substantial funds attempting to develop this approach and never succeed in developing a marketable therapeutic.

No regulatory authority has granted approval for a personalized cancer immunotherapy based on a heterologous prime-boost approach. As such, we believe the FDA has limited experience with evaluating our approach, which may increase the complexity, uncertainty and length of the regulatory approval process for our product candidates. We may never receive approval to market and commercialize any product candidate. Even if we obtain regulatory approval, the approval may be for targets, disease indications, lines of therapy or patient populations that are not as broad as we intended or desired or may require labeling that includes significant use or distribution restrictions or safety warnings. We may be required to perform additional or unanticipated clinical trials to obtain approval or be subject to post-marketing testing requirements to maintain regulatory approval. If our personalized immunotherapy candidates prove to be ineffective, unsafe or commercially unviable, our entire technology platform and pipeline would have little, if any, value, which would have a material and adverse effect on our business, financial condition, results of operations and prospects.

Results of earlier studies and trials of our product candidates may not be predictive of future trial results.

Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure or delay can occur at any time during the clinical trial process. Success in preclinical studies and early clinical trials does not ensure that later clinical trials will be successful. A number of companies in the biotechnology and pharmaceutical industries have suffered significant setbacks in clinical trials, even after positive results in earlier preclinical studies or clinical trials. These setbacks have been caused by, among other things, preclinical findings made while clinical trials were underway and safety or efficacy observations made in clinical trials, including previously unreported adverse events. Notwithstanding any potential promising results in earlier studies and trials, we cannot be certain that we will not face similar setbacks. Even if our clinical trials are completed, the results may not be sufficient to obtain regulatory approval for our product candidates. In addition, the results of our preclinical animal studies, including our non-human primate studies, may not be predictive of the results of outcomes in human clinical trials. For example, our tumor-specific cancer immunotherapy candidates and any future product candidates may demonstrate different chemical, biological and pharmacological properties in patients than they do in laboratory studies or may interact with human biological systems in unforeseen or harmful ways. Product candidates in later stages of clinical trials

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may fail to show the desired pharmacological properties or safety and efficacy traits despite having progressed through preclinical studies and initial clinical trials. Even if we are able to initiate and complete clinical trials, the results may not be sufficient to obtain regulatory approval for our product candidates.

Clinical development involves a lengthy and expensive process with an uncertain outcome, and delays can occur for a variety of reasons outside of our control.

Clinical development is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. We expect to initiate a Phase 1/2 clinical trial in the second half of 2018 for GRANITE-001; however, we may experience delays in obtaining the FDA's authorization to initiate clinical studies under our recently submitted IND, or in initiating or completing our planned studies and trials of GRANITE-001. Additionally, we cannot be certain that studies or trials for GRANITE-001, SLATE-001 or any future product candidates will begin on time, not require redesign, enroll an adequate number of subjects on time or be completed on schedule, if at all. Clinical trials can be delayed or terminated for a variety of reasons, including delays or failures related to:

- the FDA or comparable foreign regulatory authorities disagreeing as to the design or implementation of our clinical trials;
- delays in obtaining regulatory authorization to commence a trial;
- reaching agreement on acceptable terms with prospective contract research organizations, or CROs, and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- obtaining institutional review board, or IRB, approval at each trial site;
- recruiting an adequate number of suitable patients to participate in a trial;
- having subjects complete a trial or return for post-treatment follow-up;
- clinical sites deviating from trial protocol or dropping out of a trial;
- addressing subject safety concerns that arise during the course of a trial;
- adding a sufficient number of clinical trial sites;
- obtaining sufficient quantities of product candidate for use in preclinical studies or clinical trials from third-party suppliers; or
- accessing checkpoint inhibitors for use in combination with our product candidate in preclinical studies or clinical trials, including checkpoint inhibitors that have not been approved by the FDA for such use.

We may experience numerous adverse or unforeseen events during, or as a result of, preclinical studies and clinical trials that could delay or prevent our ability to receive marketing approval or commercialize our product candidates, including:

- we may receive feedback from regulatory authorities that requires us to modify the design of our clinical trials;
- clinical trials of our product candidates may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical trials or abandon our development programs, including our personalized cancer immunotherapy program;
- the number of patients required for clinical trials of our product candidates may be larger than we anticipate, enrollment in these clinical trials may be slower than we anticipate or participants may drop out of these clinical trials at a higher rate than we anticipate;

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- we or our third-party contractors may fail to comply with regulatory requirements, fail to maintain adequate quality controls, or be unable to produce sufficient product supply to conduct and complete preclinical studies or clinical trials of our product candidates in a timely manner, or at all;
- we or our investigators might have to suspend or terminate clinical trials of our product candidates for various reasons, including non-compliance with regulatory requirements, a finding that our product candidates have undesirable side effects or other unexpected characteristics, or a finding that the participants are being exposed to unacceptable health risks;
- the cost of clinical trials of our product candidates may be greater than we anticipate;
- the quality of our product candidates or other materials necessary to conduct preclinical studies or clinical trials of our product candidates may be insufficient or inadequate;
- regulators may revise the requirements for approving our product candidates, or such requirements may not be as we anticipate; and
- future collaborators may conduct clinical trials in ways they view as advantageous to them but that are suboptimal for us.

If we are required to conduct additional clinical trials or other testing of our product candidates beyond those that we currently contemplate, if we are unable to successfully complete clinical trials of our product candidates or other testing, if the results of these trials or tests are not positive or are only moderately positive or if there are safety concerns, we may:

- incur unplanned costs;
- be delayed in obtaining marketing approval for our product candidates or not obtain marketing approval at all;
- obtain marketing approval in some countries and not in others;
- obtain marketing approval for indications or patient populations that are not as broad as intended or desired;
- obtain marketing approval with labeling that includes significant use or distribution restrictions or safety warnings, including boxed warnings;
- be subject to additional post-marketing testing requirements, which could be expensive and time consuming; or
- have the treatment removed from the market after obtaining marketing approval.

We could also encounter delays if a clinical trial is suspended or terminated by us, by the IRBs of the institutions in which such trials are being conducted, by the Data Safety Monitoring Board, or DSMB, for such trial or by the FDA or other regulatory authorities. Such authorities may suspend or terminate a clinical trial due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product candidate, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial.

Further, conducting clinical trials in foreign countries, as we may do for certain of our product candidates, presents additional risks that may delay completion of our clinical trials. These risks include the failure of enrolled patients in foreign countries to adhere to clinical protocol as a result of

differences in healthcare services or cultural customs, managing additional administrative burdens associated with foreign regulatory schemes, as well as political and economic risks relevant to such foreign countries.

Principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and may receive cash or equity compensation in connection with such services. If these relationships and any related compensation result in perceived or actual conflicts of interest, or a regulatory authority concludes that the financial relationship may have affected the interpretation of the trial, the integrity of the data generated at the applicable clinical trial site may be questioned and the utility of the clinical trial itself may be jeopardized, which could result in the delay or rejection of the marketing application we submit. Any such delay or rejection could prevent or delay us from commercializing our current or future product candidates.

If any of our preclinical studies or clinical trials of our product candidates are delayed or terminated, the commercial prospects of our product candidates may be harmed, and our ability to generate revenues from any of these product candidates will be delayed or not realized at all. In addition, any delays in completing our clinical trials may increase our costs, slow down our product candidate development and approval process and jeopardize our ability to commence product sales and generate revenues. Any of these occurrences may significantly harm our business, financial condition and prospects. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates. If GRANITE-001, SLATE-001, any future product candidates or our TSNA prediction platform generally prove to be ineffective, unsafe or commercially unviable, our entire platform and approach would have little, if any, value, which would have a material and adverse effect on our business, financial condition, results of operations and prospects.

As a result of our planned trial design, the Phase 1 portion of our planned Phase 1/2 clinical trial will provide little evidence of the efficacy of our personalized immunotherapy product candidate, GRANITE-001.

Scientific principles and preclinical data suggest that combination treatment of cancer patients with our TSNA-directed immunotherapy product candidate plus checkpoint inhibitors is likely to be most effective for our target indications. The Phase 1 portion of our Phase 1/2 clinical trial, GO-004, will, consequently, involve administration of a combination therapy with GRANITE-001. Notably, all patients in the Phase 1 portion will receive anti-PD-1 monoclonal antibodies, or mAb, as background therapy. Some patients will additionally receive anti-CTLA-4 mAb. Checkpoint inhibitors such as anti-PD-1 and anti-CTLA-4 mAb are known to be effective treatments in many cancer patients and elicit objective responses in some patients. Any objective responses observed in Phase 1 will thus be in patients receiving our experimental therapy together with a checkpoint inhibitor and attribution of objective responses to the effects of GRANITE-001 alone will not be possible. We expect that efficacy will be studied carefully in the Phase 2 cohorts where the relative contributions of our personalized immunotherapy candidate and the checkpoint inhibitor will be dissected and quantified to some degree. As a result, the Phase 1 portion of our planned Phase 1/2 clinical trial will provide little evidence of the efficacy of GRANITE-001, which may not be fully understood by investors or market participants, potentially leading to negative effects on our stock price.

We may be unable to obtain regulatory approval for our tumor-specific immunotherapy product candidates under applicable regulatory requirements. The denial or delay of any such approval would delay commercialization of our product candidates and adversely impact our potential to generate revenue, our business and our results of operations.

To gain approval to market our tumor-specific immunotherapy product candidates, we must provide the FDA and foreign regulatory authorities with clinical data that adequately demonstrate the

safety and efficacy of the product candidate for the intended indication applied for in the applicable regulatory filing. Product development is a long, expensive and uncertain process, and delay or failure can occur at any stage of any of our clinical development programs. A number of companies in the biotechnology and pharmaceutical industries have suffered significant setbacks in clinical trials, even after promising results in earlier preclinical or clinical trials. These setbacks have been caused by, among other things, preclinical findings made while clinical studies were underway and safety or efficacy observations made in clinical trials, including previously unreported adverse events. Success in preclinical testing and early clinical trials does not ensure that later clinical trials will be successful, and the results of clinical trials by other parties may not be indicative of the results in trials we may conduct.

We have not previously submitted a BLA or any other marketing application to the FDA or similar filings to comparable foreign regulatory authorities. A BLA or other similar regulatory filing requesting approval to market a product candidate must include extensive preclinical and clinical data and supporting information to establish that the product candidate is safe, pure and potent for each desired indication. The BLA or other similar regulatory filing must also include significant information regarding the chemistry, manufacturing and controls for the product.

The research, testing, manufacturing, labeling, approval, sale, marketing and distribution of biologic products are subject to extensive regulation by the FDA and other regulatory authorities in the United States and other countries, and such regulations differ from country to country. We are not permitted to market our product candidates in the United States or in any foreign countries until they receive the requisite approval from the applicable regulatory authorities of such jurisdictions.

The FDA or any foreign regulatory bodies can delay, limit or deny approval of our product candidates for many reasons, including:

- our inability to demonstrate to the satisfaction of the FDA or the applicable foreign regulatory body that any of our product candidates are safe and effective for the requested indication;
- the FDA's or the applicable foreign regulatory agency's disagreement with our trial protocol or the interpretation of data from preclinical studies or clinical trials;
- our inability to demonstrate that the clinical and other benefits of any of our product candidates outweigh any safety or other perceived risks;
- the FDA's or the applicable foreign regulatory agency's requirement for additional preclinical studies or clinical trials;
- the FDA's or the applicable foreign regulatory agency's non-approval of the formulation, labeling or specifications of GRANITE-001, SLATE-001 or any of our future product candidates;
- the FDA's or the applicable foreign regulatory agency's failure to approve our manufacturing processes and facilities or the facilities of third-party manufacturers upon which we rely; or
- the potential for approval policies or regulations of the FDA or the applicable foreign regulatory agencies to significantly change in a manner rendering our clinical data insufficient for approval.

Of the large number of biopharmaceutical products in development, only a small percentage successfully complete the FDA or other regulatory bodies' approval processes and are commercialized.

Even if we eventually complete clinical testing and receive approval from the FDA or applicable foreign agencies for any of our product candidates, the FDA or the applicable foreign regulatory agency may grant approval contingent on the performance of costly additional clinical trials which may

be required after approval. The FDA or the applicable foreign regulatory agency also may approve our lead product candidate for a more limited indication or a narrower patient population than we originally requested, and the FDA, or applicable foreign regulatory agency, may not approve our product candidates with the labeling that we believe is necessary or desirable for the successful commercialization of such product candidates.

Any delay in obtaining, or inability to obtain, applicable regulatory approval would delay or prevent commercialization of our product candidates and would materially adversely impact our business and prospects.

We have chosen to prioritize development of our personalized immunotherapy candidate, GRANITE-001. We may expend our limited resources on candidates or indications that do not yield a successful product and fail to capitalize on other product candidates or indications for which there may be a greater likelihood of success or may be more profitable.

We are currently developing our personalized cancer immunotherapy candidate based on the prediction of a patient's TSNA, in order to address a variety of cancers, including metastatic non-small cell lung cancer, or NSCLC, and gastroesophageal, bladder and colorectal cancers. We have strategically determined to initially focus solely on the development of personalized cancer immunotherapy candidates rather than pursue other types of immunotherapies based, in part, on the significant resources required to develop and manufacture immunotherapies. As a result, we may initially be foregoing other potentially more profitable therapies or those with a greater likelihood of success.

Our decisions concerning the allocation of research, development, collaboration, management and financial resources toward particular product candidates or therapeutic areas may not lead to the development of any viable commercial product and may divert resources away from better opportunities. Similarly, our potential decisions to delay, terminate or collaborate with third parties in respect of certain programs may subsequently also prove to be suboptimal and could cause us to miss valuable opportunities. If we make incorrect determinations regarding the viability or market potential of any of our programs or product candidates or misread trends in the oncology or biopharmaceutical industry, our business, financial condition and results of operations could be materially adversely affected. As a result, we may fail to capitalize on viable commercial products or profitable market opportunities, be required to forego or delay pursuit of opportunities with other product candidates or other diseases and disease pathways that may later prove to have greater commercial potential than those we choose to pursue, or relinquish valuable rights to such product candidates through collaboration, licensing or other royalty arrangements in cases in which it would have been advantageous for us to invest additional resources to retain development and commercialization rights.

In order for our tumor-specific immunotherapy candidate, GRANITE-001, to be commercially viable, they must be utilized in early-stages of cancer treatment given the time required to manufacture the personalized therapy.

Cancer therapies are sometimes characterized as first line, second line or third line, and the FDA often approves new systemic therapies initially only for third line use. When cancer is detected early enough, surgery plus first-line systemic therapy is sometimes adequate to cure the cancer. Whenever first-line therapy, usually chemotherapy, hormone therapy, radiotherapy, surgery or a combination of these, proves unsuccessful, second line therapy may be administered. Second-line therapies often consist of more chemotherapy, radiation, antibody drugs, tumor targeted small molecules or a combination of these. Third-line therapies can include bone marrow transplantation, antibody and small molecule targeted therapies and new technologies such as adoptive cell therapies.

Traditionally, novel therapeutics are developed and approved in late (third) line therapy of cancer patients. Such clinical programs carry risk of failure because patients are often quite frail, with effects of multiple rounds of prior therapy weakening bone marrow, immune systems and general fitness. Immunotherapy, such as checkpoint inhibitors, has generally been shown to be more effective when used in earlier lines of therapy, with prospect of very durable responses in some patients and there is a trend towards earlier use of these agents, avoiding in particular cytotoxic chemotherapy agents which carry substantial toxicity and very little prospect of long-term responses. Tumor-specific immunotherapy product candidates such as GRANITE-001, as well as “off-the-shelf” product candidates such as SLATE-001, are expected to be developed in combination with checkpoint inhibitors and can, in principle, be safely used in early lines of therapy. Our clinical development program will thus aim to study our products in early lines of cancer treatment, which carry a higher safety bar, and often a greater expectation of efficacy over control arms. Such studies may thus be relatively large and slow to achieve maturity. There are new tools available to stratify cancer patients for risk of recurrence or progression, such as liquid biopsies that measure the amount of circulating tumor-derived DNA. We will utilize these tools to attempt to expedite clinical trials in early-stage cancer patients by focusing upon patients at above-average risk of disease recurrence or progression, which events are typical endpoints in clinical trials. The development of liquid biopsies is at an early stage, however, and these tools may prove to carry low utility and thus render early-stage cancer trials slow, necessarily large and expensive. The safety of our product candidates in combination with checkpoint inhibitors in early lines of therapy may also prove to be unacceptable.

We expect to seek approval of our product candidates both as late-line therapy where appropriate, but also as a first line therapy wherever possible and potentially as a second-line therapy. There is no guarantee that our product candidates, even if approved in late-line therapy, would be approved for second-line or first-line therapy. In addition, we may have to conduct additional clinical trials prior to gaining approval for second-line or first-line therapy.

GRANITE-001 will initially take approximately 16-20 weeks to be manufactured and released for human use, and this long timeline demands that either patients are consented and entered into our trials when they start a prior line of therapy, and start our therapy upon disease progression, or we initiate treatment in patients who have entered the maintenance phase of their original line of treatment. For example, we might enroll newly diagnosed patients who are due to receive front-line chemotherapy and then start their therapy with our immunotherapy product candidate as second-line treatment when they progress upon front-line chemotherapy or fail to tolerate it. This carries the risk of time delays or drop-out, i.e. patients may not progress after first-line chemotherapy for a long time, or they may decide not to receive an immunotherapy product candidate we have manufactured for them, at our expense. Alternatively we may treat first-line patients once they have completed their initial treatment and have not progressed (called maintenance therapy)—this renders efficacy harder to interpret versus simple treatment studies (any objective response cannot clearly be attributed to our products) and may be complicated by standard of care treatments which may necessarily be continued alongside our immunotherapy candidates, further confounding interpretation of efficacy.

Our projections of both the number of people who have the cancers we are targeting, as well as the subset of people with these cancers in a position to receive third-line therapy and who have the potential to benefit from treatment with our product candidates, are based on our beliefs and estimates. These estimates have been derived from a variety of sources, including scientific literature, surveys of clinics, patient foundations, and market research and may prove to be incorrect. Regulatory authorities also may establish narrower definitions around when a patient is ineligible for other treatments than we have used in our projections, and that would reduce the size of the patient population eligible for our product candidates. Further, new studies may change the estimated incidence or prevalence of these cancers. The number of patients may turn out to be lower than expected. Additionally, the potentially addressable patient population for our product candidates may be limited or may not be amenable to

treatment with our product candidates. For instance, we anticipate that only a fraction of colorectal cancer patients will be predicted to have a high enough probability of TSNA presence to merit their inclusion into our program. Even if we obtain significant market share for our product candidates, because the potential target populations are small, we may never achieve profitability without obtaining regulatory approval for additional indications, including use as a first-line or second-line therapy.

We may not be successful in our efforts to create a pipeline of immunotherapy candidates or to develop commercially successful products. If we fail to successfully develop additional product candidates, our commercial opportunity may be limited.

We are committed to developing personalized cancer immunotherapies to fight multiple cancer types and are currently advancing multiple product candidates to address a variety of cancers, including metastatic NSCLC and colorectal, gastroesophageal and bladder cancers. Utilizing our EDGE platform, we believe we can develop multiple therapeutic classes of products that will generate a T cell immune response unleashing the natural power of the immune system on the tumor cells. However, one or more of these alternative therapeutic products may never be successfully validated in a human. In addition, identifying, developing, obtaining regulatory approval for and commercializing therapies for the treatment of cancer will require substantial additional funding beyond the net proceeds of this offering and is prone to the risks of failure inherent in therapeutic product development. Research programs to identify product candidates also require substantial technical, financial and human resources, regardless of whether or not any product candidates are ultimately identified, and even if our research programs initially show promise in identifying potential product candidates, they may fail to yield product candidates for clinical development.

We therefore cannot provide any assurance that we will be able to successfully identify additional product candidates, advance any of these additional product candidates through the development process, successfully commercialize any such additional product candidates, if approved, or assemble sufficient resources to identify, acquire, develop or, if approved, commercialize additional product candidates. If we are unable to successfully identify, acquire, develop and commercialize additional product candidates, our commercial opportunity may be limited.

If we encounter difficulties enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.

The timely completion of clinical trials in accordance with their protocols depends, among other things, on our ability to enroll a sufficient number of patients who remain in the study until its conclusion. We may experience difficulties in patient enrollment in our clinical trials for a variety of reasons. The enrollment of patients depends on many factors, including:

- the patient eligibility criteria defined in the protocol;
- the size of the patient population required for analysis of the trial's primary endpoints;
- the proximity of patients to trial sites;
- the design of the trial;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- clinicians' and patients' perceptions as to the potential advantages of the product candidate being studied in relation to other available therapies, including any new therapies that may be approved for the indications we are investigating; and
- our ability to obtain and maintain patient consents.

In addition, our clinical trials may compete with other clinical trials for product candidates that are in the same therapeutic areas as our product candidates, and this competition will reduce the number and types of patients available to us, because some patients who might have opted to enroll in our trials may instead opt to enroll in a trial being conducted by one of our competitors. Since the number of qualified clinical investigators is limited, we may conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which will reduce the number of patients who are available for our clinical trials in such clinical trial site.

Further, the targeting of TSNA may result in unforeseen events, including harming healthy tissues in humans. As a result, it is possible that safety concerns could negatively affect patient enrollment among the patient populations that we intend to treat. Delays in patient enrollment may result in increased costs or may affect the timing or outcome of the planned clinical trials, which could prevent completion of these trials and adversely affect our ability to advance the development of our product candidates.

Our tumor-specific immunotherapy product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval, if any.

As with most biological products, use of our product candidates could be associated with side effects or adverse events which can vary in severity from minor reactions to death and in frequency from infrequent to prevalent. Undesirable side effects or unacceptable toxicities caused by our product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or comparable foreign regulatory authorities. While we have not yet initiated clinical trials for GRANITE-001, it is likely that there will be side effects associated with its use. Results of our trials could reveal a high and unacceptable severity and prevalence of these or other side effects.

If unacceptable side effects arise in the development of our product candidates, we, the FDA, the IRBs at the institutions in which our studies are conducted, or the DSMB could suspend or terminate our clinical trials or the FDA or comparable foreign regulatory authorities could order us to cease clinical trials or deny approval of our product candidates for any or all targeted indications. Treatment-related side effects could also affect patient recruitment or the ability of enrolled patients to complete any of our clinical trials or result in potential product liability claims. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff. We expect to have to train medical personnel using our product candidates to understand the side effect profiles for our clinical trials and upon any commercialization of any of our product candidates. Inadequate training in recognizing or managing the potential side effects of our product candidates could result in patient injury or death. Any of these occurrences may harm our business, financial condition and prospects significantly.

In addition, even if we successfully advance one of our tumor-specific immunotherapy product candidates into and through clinical trials, such trials will likely only include a limited number of subjects and limited duration of exposure to our product candidates. As a result, we cannot be assured that adverse effects of our product candidates will not be uncovered when a significantly larger number of patients are exposed to the product candidate. Further, any clinical trials may not be sufficient to determine the effect and safety consequences of taking our product candidates over a multi-year period.

If any of our product candidates receives marketing approval and we or others later identify undesirable side effects caused by such products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw their approval of the product;
- we may be required to recall a product or change the way such product is administered to patients;
- additional restrictions may be imposed on the marketing of the particular product or the manufacturing processes for the product or any component thereof;
- regulatory authorities may require the addition of labeling statements, such as a “black box” warning or a contraindication;
- we may be required to implement a Risk Evaluation and Mitigation Strategy, or REMS, or create a Medication Guide outlining the risks of such side effects for distribution to patients;
- we could be sued and held liable for harm caused to patients;
- the product may become less competitive; and
- our reputation may suffer.

Any of the foregoing events could prevent us from achieving or maintaining market acceptance of the particular product candidate, if approved, and result in the loss of significant revenues to us, which would materially and adversely affect our results of operations and business. In addition, if one or more of our product candidates or our TSNA-directed immunotherapy approach generally prove to be unsafe, our entire technology platform and pipeline could be affected, which would have a material and adverse effect on our business, financial condition, results of operations and prospects.

Even if one of our tumor-specific immunotherapy product candidates obtains regulatory approval, they may fail to achieve the broad degree of physician and patient adoption and use necessary for commercial success.

Even if one of our tumor-specific immunotherapy product candidates receives FDA or other regulatory approvals, the commercial success of any of our current or future product candidates will depend significantly on the broad adoption and use of the resulting product by physicians and patients for approved indications. For a variety of reasons, including among other things, competitive factors, pricing or physician preference, reimbursement by insurers, the degree and rate of physician and patient adoption of our current or future product candidates, if approved, will depend on a number of factors, including:

- the clinical indications for which the product is approved and patient demand for approved products that treat those indications;
- the safety and efficacy of our product as compared to other available therapies;
- the time required for manufacture and release of our personalized immunotherapy products;
- the availability of coverage and adequate reimbursement from managed care plans, private insurers, government payors (such as Medicare and Medicaid) and other third-party payors for any of our product candidates that may be approved;
- acceptance by physicians, operators of hospitals and clinics and patients of the product as a safe and effective treatment;
- physician and patient willingness to adopt a new therapy over other available therapies for a particular indication;

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- proper training and administration of our product candidates by physicians and medical staff;
- patient satisfaction with the results and administration of our product candidates and overall treatment experience, including, for example, the convenience of any dosing regimen;
- the cost of treatment with our product candidates in relation to alternative treatments and reimbursement levels, if any, and willingness to pay for the product, if approved, on the part of insurance companies and other third-party payers, physicians and patients;
- the prevalence and severity of side effects;
- limitations or warnings contained in the FDA-approved labeling for our products;
- the willingness of physicians, operators of hospitals and clinics and patients to utilize or adopt our products as a solution;
- any FDA requirement for a REMS;
- the effectiveness of our sales, marketing and distribution efforts;
- adverse publicity about our products or favorable publicity about competitive products; and
- potential product liability claims.

We cannot assure you that our current or future product candidates, if approved, will achieve broad market acceptance among physicians and patients. Any failure by our product candidates that obtain regulatory approval to achieve market acceptance or commercial success would adversely affect our results of operations.

We currently manufacture a portion of our initial product candidate internally and rely on qualified third parties to supply components of our initial product candidate. Our inability to manufacture sufficient quantities of GRANITE-001 or any future product candidates, or the loss of our third-party suppliers, or our or their failure to comply with applicable regulatory requirements or to supply sufficient quantities at acceptable quality levels or prices, or at all, would materially and adversely affect our business.

Manufacturing is a vital component of our tumor-specific immunotherapy approach and we have invested significantly in our manufacturing facility. To ensure timely and consistent product supply assurance to our patients we currently use a hybrid product supply approach whereby certain elements of our initial product candidate are manufactured internally at our manufacturing facilities in Pleasanton, California, and other elements are manufactured at qualified third-party contract manufacturing organizations, or CMOs. All internal and third party contract manufacturing is performed under cGMP guidelines. In the future, we plan to internalize a majority of the manufacturing steps in the supply chain to optimize cost and production time, as well as establish full control over intellectual property and product quality. To do so, we will need to scale up our manufacturing operations, as we do not currently have the infrastructure or capability internally to manufacture all supplies needed for our product candidates or the materials necessary to produce our product candidates for use in the conduct of our preclinical studies or clinical trials, and we currently lack the internal resources and the capability to manufacture certain elements of our product candidates on a clinical scale. Accordingly, we will be required to make significant investments in our manufacturing facility and processing in the future, and our efforts to scale our manufacturing operations may not succeed.

In addition, our facilities and the facilities used by our CMOs to manufacture our product candidates are subject to various regulatory requirements and may be subject to the inspection of the FDA or other regulatory authorities. We do not control the manufacturing process at our CMOs, and

are completely dependent on them for compliance with current regulatory requirements. If we or our CMOs cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or comparable regulatory authorities in foreign jurisdictions, we may not be able to rely on our or their manufacturing facilities for the manufacture of elements of our product candidates. In addition, we have limited control over the ability of our CMOs to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority finds our facilities or those of our CMOs inadequate for the manufacture of our product candidates or if such facilities are subject to enforcement action in the future or are otherwise inadequate, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates.

Additionally, we and our CMOs may experience manufacturing difficulties due to resource constraints or as a result of labor disputes or unstable political environments. If we or our CMOs were to encounter any of these difficulties, our ability to provide our product candidate to patients in clinical trials, or to provide product for the treatment of patients once approved, would be jeopardized.

Our tumor-specific product candidates are biologics with complex and time-consuming manufacturing processes and we may encounter difficulties in production, particularly with respect to process development or scaling-out of our manufacturing capabilities. If we or any of our third-party manufacturers encounter such difficulties, our ability to provide supply of our product candidates for clinical trials or our products for patients, if approved, could be delayed or stopped, or we may be unable to maintain a commercially viable cost structure.

Our tumor-specific immunotherapy product candidate is considered to be a biologic and the manufacturing processes is complex, time-consuming, highly-regulated and subject to multiple risks. The manufacture of our product candidates involves extraction of genetic material from patient tumor samples, genetic manipulations at the gene sequence level, live cell culture operations, specialized formulations and aseptic fill finish operations. As a result of these complexities, the cost to manufacture biologics in general, and our personalized immunotherapy candidate, in particular, is generally higher than traditional small molecule chemical compounds, and the manufacturing process is less reliable and more difficult and time-consuming to reproduce. For example, the entire cGMP manufacturing process from biopsy receipt to the release and shipment of the personalized immunotherapy to the clinical site for patient administration will initially take approximately 16-20 weeks. In addition, our manufacturing process is in its early stages of development and will be susceptible to product loss or failure, or product variation that may adversely impact patient outcomes. Our supply chain may not function efficiently due to logistical issues associated with but not limited to the collection of a tumor biopsy from the patient, shipping such material to the manufacturing site, sequencing the biopsy specimen, manufacturing the immunotherapy components, shipping the final immunotherapy back to the patient, and injecting the patient with the immunotherapy. Manufacturing issues or different product characteristics resulting from process development activities or even minor deviations during normal manufacturing processes could result in reduced production yields, product defects and other supply disruptions. If for any reason we lose a patient's biopsy or an in-process product at any point in the process, the manufacturing process for that patient will need to be restarted and the resulting delay may adversely affect that patient's outcome. Because our product candidates are manufactured specifically for an individual patient, we will be required to maintain a chain of identity and chain of custody with respect to materials as they move from the patient to the manufacturing facility, through the manufacturing process, and back to the patient. Maintaining such a chain of identity and chain of custody is difficult and complex, and the failure to do so could result in adverse patient outcomes, loss of product or regulatory action including withdrawal of our products from the market, if licensed.

As part of our process development efforts, we also may make changes to our manufacturing processes at various points during development, for various reasons, such as controlling costs,

achieving scale, decreasing processing time, increasing manufacturing success rate, or other reasons. Such changes carry the risk that they will not achieve their intended objectives, and any of these changes could cause our product candidates to perform differently and affect the results of our ongoing clinical trials or future clinical trials. In some circumstances, changes in the manufacturing process may require us to perform *ex vivo* comparability studies and to collect additional data from patients prior to undertaking more advanced clinical trials. For instance, changes in our process during the course of clinical development may require us to show the comparability of the product used in earlier clinical phases or at earlier portions of a trial to the product used in later clinical phases or later portions of the trial.

Furthermore, if microbial, viral or other contaminations are discovered in our supply of our product candidates or in our manufacturing facilities or those of our CMOs, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. We cannot assure you that any such contaminations or stability failures or other issues relating to the manufacture of our product candidates will not occur in the future.

We depend on third-party suppliers for key materials used in our manufacturing processes, and the loss of these third-party suppliers or their inability to supply us with adequate materials could harm our business.

We rely on third-party suppliers for certain materials required for the production of our personalized immunotherapy candidate. Our dependence on these third-party suppliers and the challenges we may face in obtaining adequate supplies of materials involve several risks, including limited control over pricing, availability, quality and delivery schedules. As a small company, our negotiation leverage is limited and we are likely to get lower priority than our competitors that are larger than we are. We cannot be certain that our suppliers will continue to provide us with the quantities of these raw materials that we require or satisfy our anticipated specifications and quality requirements. Any supply interruption in limited or sole sourced raw materials could materially harm our ability to manufacture our product candidates until a new source of supply, if any, could be identified and qualified. We may be unable to find a sufficient alternative supply channel in a reasonable time or on commercially reasonable terms. Any performance failure on the part of our suppliers could delay the development and potential commercialization of our product candidates, including limiting supplies necessary for clinical trials and regulatory approvals, which would have a material adverse effect on our business.

We rely on third parties in the conduct of all of our preclinical studies and intend to rely on third parties in the conduct of all of our future clinical trials. If these third parties do not successfully carry out their contractual duties, fail to comply with applicable regulatory requirements or meet expected deadlines, we may be unable to obtain regulatory approval for our tumor-specific immunotherapy product candidates.

We currently do not have the ability to independently conduct preclinical studies that comply with the regulatory requirements known as good laboratory practice, or GLP, requirements. We also do not currently have the ability to independently conduct any clinical trials. The FDA and regulatory authorities in other jurisdictions require us to comply with regulations and standards, commonly referred to as good clinical practice, or GCP, requirements for conducting, monitoring, recording and reporting the results of clinical trials, in order to ensure that the data and results are scientifically credible and accurate and that the trial subjects are adequately informed of the potential risks of participating in clinical trials. We rely on medical institutions, clinical investigators, contract laboratories and other third parties, such as CROs, to conduct GLP-compliant preclinical studies and GCP-compliant clinical trials on our product candidates properly and on time. While we have agreements governing their activities, we control only certain aspects of their activities and have limited

influence over their actual performance. The third parties with whom we contract for execution of our GLP-compliant preclinical studies and our GCP-compliant clinical trials play a significant role in the conduct of these studies and trials and the subsequent collection and analysis of data. These third parties are not our employees and, except for restrictions imposed by our contracts with such third parties, we have limited ability to control the amount or timing of resources that they devote to our programs. Although we rely on these third parties to conduct our GLP-compliant preclinical studies and GCP-compliant clinical trials, we remain responsible for ensuring that each of our preclinical studies and clinical trials is conducted in accordance with its investigational plan and protocol and applicable laws and regulations, and our reliance on the CROs does not relieve us of our regulatory responsibilities.

Many of the third parties with whom we contract may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical trials or other drug development activities that could harm our competitive position. Further, under certain circumstances, these third parties may terminate their agreements with us upon as little as 10 days' prior written notice. Some of these agreements may also be terminated by such third parties under certain other circumstances, including our insolvency. If the third parties conducting our preclinical studies or our clinical trials do not adequately perform their contractual duties or obligations, experience significant business challenges, disruptions or failures, do not meet expected deadlines, terminate their agreements with us or need to be replaced, or if the quality or accuracy of the data they obtain is compromised due to their failure to adhere to our protocols or to GLPs/GCPs, or for any other reason, we may need to enter into new arrangements with alternative third parties. This could be difficult, costly or impossible, and our preclinical studies or clinical trials may need to be extended, delayed, terminated or repeated. As a result, we may not be able to obtain regulatory approval in a timely fashion, or at all, for the applicable product candidate, our financial results and the commercial prospects for our product candidates would be harmed, our costs could increase, and our ability to generate revenues could be delayed.

We face significant competition in an environment of rapid technological and scientific change, and we will face significant competition and our failure to effectively compete may prevent us from achieving significant market penetration. Most of our competitors have significantly greater resources than we do and we may not be able to successfully compete.

The biotechnology and pharmaceutical industries in particular are characterized by rapidly advancing technologies, intense competition and a strong emphasis on developing proprietary therapeutics. We compete with a variety of multinational biopharmaceutical companies and specialized biotechnology companies, as well as technology being developed at universities and other research institutions. Our competitors have developed, are developing or will develop product candidates and processes competitive with our product candidates. Competitive therapeutic treatments include those that have already been approved and accepted by the medical community and any new treatments that enter the market. We believe that a significant number of product candidates are currently under development, and may become commercially available in the future, for the treatment of diseases and other conditions for which we may try to develop product candidates. There is intense and rapidly evolving competition in the biotechnology, biopharmaceutical and antibody and immunoregulatory therapeutics fields. We believe that while our discovery platform, its associated intellectual property and our scientific and technical know-how give us a competitive advantage in this space, competition from many sources remains. Our competitors include larger and better funded biopharmaceutical, biotechnological and therapeutics companies. Moreover, we also compete with current and future therapeutics developed at universities and other research institutions.

Our success will partially depend on our ability to develop and protect therapeutics that are safer and more effective than competing products. Our commercial opportunity and success will be reduced

or eliminated if competing products that are safer, more effective, or less expensive than the therapeutics we develop.

If either of GRANITE-001 or SLATE-001 is approved, it will compete with a range of therapeutic treatments that are either in development or currently marketed. Indeed, a variety of oncology drugs and therapeutic biologics are on the market or in clinical development. Such marketed therapies range from immune checkpoint inhibitors such as Bristol-Myers Squibb Company's OPDIVO and YERVOY, Merck & Co., Inc.'s KEYTRUDA and Genentech, Inc.'s TECENTRIQ, and T cell engager immunotherapies such as Amgen, Inc.'s BLINCYTO. The most common therapeutic treatments for common solid tumors are chemotherapeutic compounds, radiation therapy, targeted therapies and now immunotherapies.

In addition, numerous compounds are in clinical development for cancer treatment. The clinical development pipeline for cancer includes small molecules, antibodies and immunotherapies from a variety of groups, including in the neoantigen space, the bispecific antibody space and engineered cell therapy and TCR space. Many of these companies are well-capitalized and, in contrast to us, have significant clinical experience.

Many of our competitors have significantly greater financial, technical, manufacturing, marketing, sales and supply resources or experience than we do. If we successfully obtain approval for any product candidate, we will face competition based on many different factors, including the safety and effectiveness of our products, the ease with which our products can be administered and the extent to which patients accept relatively new routes of administration, the timing and scope of regulatory approvals for these products, the availability and cost of manufacturing, marketing and sales capabilities, price, reimbursement coverage and patent position. Competing products could present superior treatment alternatives, including by being more effective, safer, less expensive or marketed and sold more effectively than any products we may develop. Competitive products may make any products we develop obsolete or noncompetitive before we recover the expense of developing and commercializing our product candidates. Such competitors could also recruit our employees, which could negatively impact our level of expertise and our ability to execute our business plan. For additional information regarding our competition, see the section of this prospectus captioned "Business—Competition."

The successful commercialization of our product candidates will depend in part on the extent to which governmental authorities, private health insurers, and other third-party payors provide coverage, adequate reimbursement levels and implement pricing policies favorable for our product candidates. Failure to obtain or maintain coverage and adequate reimbursement for our product candidates, if approved, could limit our ability to market those products and decrease our ability to generate revenue.

The availability of coverage and adequacy of reimbursement by managed care plans, governmental healthcare programs, such as Medicare and Medicaid, private health insurers and other third-party payors are essential for most patients to be able to afford medical services and pharmaceutical products such as our product candidates that receive FDA approval. Our ability to achieve acceptable levels of coverage and reimbursement for our products or procedures using our products by third-party payors will have an effect on our ability to successfully commercialize our product candidates. Obtaining coverage and adequate reimbursement for our products may be particularly difficult because of the higher prices often associated with drugs administered under the supervision of a physician. Separate reimbursement for the product itself or the treatment or procedure in which our product is used may not be available. A decision by a third-party payor not to cover or separately reimburse for our products or procedures using our products, could reduce physician utilization of our products once approved. Assuming there is coverage for our product candidates, or procedures using our product candidates by a third-party payor, the resulting reimbursement payment

rates may not be adequate or may require co-payments that patients find unacceptably high. We cannot be sure that coverage and reimbursement in the United States, the European Union or elsewhere will be available for our product candidates or procedures using our product candidates, or any product that we may develop, and any reimbursement that may become available may not be adequate or may be decreased or eliminated in the future.

Third-party payors increasingly are challenging prices charged for pharmaceutical products and services, and many third-party payors may refuse to provide coverage and reimbursement for particular drugs or biologics when an equivalent generic drug, biosimilar or a less expensive therapy is available. It is possible that a third-party payor may consider our product candidates as substitutable and only offer to reimburse patients for the less expensive product. Even if we show improved efficacy or improved convenience of administration with our product candidates, pricing of existing third-party therapeutics may limit the amount we will be able to charge for our product candidates. These third-party payors may deny or revoke the reimbursement status of our product candidates, if approved, or establish prices for our product candidates at levels that are too low to enable us to realize an appropriate return on our investment. If reimbursement is not available or is available only at limited levels, we may not be able to successfully commercialize our product candidates, and may not be able to obtain a satisfactory financial return on our product candidates.

There is significant uncertainty related to the insurance coverage and reimbursement of newly-approved products, especially novel products like our immunotherapy product candidates. No regulatory authority has granted approval for a tumor-specific cancer immunotherapy based on a vaccine approach, and there is no model for reimbursement of this type of product. The Medicare and Medicaid programs increasingly are used as models in the United States for how private payors and other governmental payors develop their coverage and reimbursement policies for drugs and biologics. Some third-party payors may require pre-approval of coverage for new or innovative devices or drug therapies before they will reimburse healthcare providers who use such therapies. We cannot predict at this time what third-party payors will decide with respect to the coverage and reimbursement for our product candidates.

No uniform policy for coverage and reimbursement for products exists among third-party payors in the United States. Therefore, coverage and reimbursement for products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that may require us to provide scientific and clinical support for the use of our product candidates to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance. Furthermore, rules and regulations regarding reimbursement change frequently, in some cases on short notice, and we believe that changes in these rules and regulations are likely.

Outside the United States, international operations are generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on cost-containment initiatives in Europe and other countries have and will continue to put pressure on the pricing and usage of our product candidates. In many countries, the prices of medical products are subject to varying price control mechanisms as part of national health systems. Other countries allow companies to fix their own prices for medical products, but monitor and control company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amount that we are able to charge for our product candidates. Accordingly, in markets outside the United States, the reimbursement for our product candidates may be reduced compared with the United States and may be insufficient to generate commercially-reasonable revenue and profits.

Moreover, increasing efforts by governmental and third-party payors in the United States and abroad to cap or reduce healthcare costs may cause such organizations to limit both coverage and the

level of reimbursement for newly approved products and, as a result, they may not cover or provide adequate payment for our product candidates. We expect to experience pricing pressures in connection with the sale of our product candidates due to the trend toward managed health care, the increasing influence of health maintenance organizations and additional legislative changes. The downward pressure on healthcare costs in general, particularly prescription drugs and biologics and surgical procedures and other treatments, has become intense. As a result, increasingly high barriers are being erected to the entry of new products.

If we are unable to support demand for our existing or future services, including ensuring that we have adequate capacity to meet increased demand, or we are unable to successfully manage the evolution of our EDGE platform, our business could suffer.

As the demand for our personalized immunotherapy candidate increases with our clinical trial needs, we will need to continue to increase our workflow capacity for sample intake and general process improvements, expand our internal quality assurance program, and extend our EDGE platform based on additional tumor data collected from our clinical trials at a larger scale within expected turnaround times. We will need additional certified laboratory scientists and technicians and other scientific and technical personnel to process higher volumes of tumor biopsies. Portions of our process are not automated and will require additional personnel to scale. We will also need to purchase additional equipment, some of which can take several months or more to procure, set up, and validate, and increase our software and computing capacity to meet increased volume. There is no assurance that any of these increases in scale, expansion of personnel, equipment, software and computing capacities, or process enhancements will be successfully implemented, or that we will have adequate space in our laboratory facilities to accommodate such required expansion.

As we progress into clinical development and expand our manufacturing capabilities, we will need to incorporate new equipment, implement new technology systems and laboratory processes, and hire new personnel with different qualifications. Failure to manage this growth or transition could result in turnaround time delays, higher service costs, declining service quality, deteriorating customer service, and slower responses to competitive challenges. A failure in any one of these areas could make it difficult for us to meet market expectations for our services, and could damage our reputation and the prospects for our business.

We currently have no sales organization. If we are unable to establish sales capabilities on our own or through third parties, we may not be able to market and sell our product candidates effectively in the United States and foreign jurisdictions, if approved, or generate product revenue.

We currently do not have a marketing or sales organization. In order to commercialize our product candidates, if approved, in the United States and foreign jurisdictions, we must build our marketing, sales, distribution, managerial and other non-technical capabilities or make arrangements with third parties to perform these services, and we may not be successful in doing so. If any of our product candidates receive regulatory approval, we expect to establish a sales organization with technical expertise and supporting distribution capabilities to commercialize each such product candidate, which will be expensive and time consuming. We have no prior experience in the marketing, sale and distribution of pharmaceutical products and there are significant risks involved in building and managing a sales organization, including our ability to hire, retain, and incentivize qualified individuals, generate sufficient sales leads, provide adequate training to sales and marketing personnel, and effectively manage a geographically dispersed sales and marketing team. Any failure or delay in the development of our internal sales, marketing and distribution capabilities would adversely impact the commercialization of these products. We may choose to collaborate with third parties that have direct sales forces and established distribution systems, either to augment our own sales force and

distribution systems or in lieu of our own sales force and distribution systems. If we are unable to enter into such arrangements on acceptable terms or at all, we may not be able to successfully commercialize our product candidates. If we are not successful in commercializing our product candidates or any future product candidates, either on our own or through arrangements with one or more third parties, we may not be able to generate any future product revenue and we would incur significant additional losses.

We will need to increase the size of our organization, and we may experience difficulties in managing growth.

As of August 20, 2018, we had 100 full-time employees. We will need to continue to expand our managerial, operational, finance and other resources in order to manage our operations and clinical trials, continue our development activities and commercialize our lead product candidate or any future product candidates. Our management and personnel, systems and facilities currently in place may not be adequate to support this future growth. Our need to effectively execute our growth strategy requires that we:

- manage our preclinical studies and clinical trials effectively;
- identify, recruit, retain, incentivize and integrate additional employees, including sales personnel;
- manage our internal development and operational efforts effectively while carrying out our contractual obligations to third parties; and
- continue to improve our operational, financial and management controls, reports systems and procedures.

If we fail to attract and retain senior management and key scientific personnel, our business may be materially and adversely affected.

Our success depends in part on our continued ability to attract, retain and motivate highly qualified management, clinical and scientific personnel. We are highly dependent upon our senior management, particularly our President and Chief Executive Officer, as well as our senior scientists and other members of our senior management team. The loss of services of any of these individuals could delay or prevent the successful development of our products, initiation or completion of our planned clinical trials or the commercialization of our lead product candidate or any future product candidates.

Competition for qualified personnel in the biotechnology and biopharmaceutical fields is intense due to the limited number of individuals who possess the skills and experience required by our industry. We will need to hire additional personnel as we expand our clinical development and if we initiate commercial activities. We may not be able to attract and retain quality personnel on acceptable terms, or at all. In addition, to the extent we hire personnel from competitors, we may be subject to allegations that they have been improperly solicited or that they have divulged proprietary or other confidential information, or that their former employers own their research output.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our current or future product candidates.

We face an inherent risk of product liability as a result of the planned clinical testing of our product candidates and will face an even greater risk if we commercialize any products. For example, we may be sued if any product we develop allegedly causes injury or is found to be otherwise unsuitable during product testing, manufacturing, marketing or sale. Any such product liability claims

may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability, and a breach of warranty. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our product candidates. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for our current or future product candidates;
- injury to our reputation;
- withdrawal of clinical trial participants;
- costs to defend the related litigation;
- a diversion of management's time and our resources;
- substantial monetary awards to trial participants or patients;
- regulatory investigations, product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue; and
- the inability to commercialize our current or any future product candidates.

Our inability to obtain and maintain sufficient product liability insurance at an acceptable cost and scope of coverage to protect against potential product liability claims could prevent or inhibit the commercialization of our current or any future product candidates we develop. We currently carry product liability insurance covering our clinical trials in the amount of \$10 million in the aggregate. Although we maintain such insurance, any claim that may be brought against us could result in a court judgment or settlement in an amount that is not covered, in whole or in part, by our insurance or that is in excess of the limits of our insurance coverage. Our insurance policies also have various exclusions and deductibles, and we may be subject to a product liability claim for which we have no coverage. We will have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient funds to pay such amounts. Moreover, in the future, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses. If and when we obtain approval for marketing any of our product candidates, we intend to expand our insurance coverage to include the sale of such product candidate; however, we may be unable to obtain this liability insurance on commercially reasonable terms or at all.

Our strategic collaboration with bluebird bio, or any future collaboration arrangements that we may enter into, may not be successful, which could significantly limit the likelihood of receiving the potential economic benefits of the collaboration and adversely affect our ability to develop and commercialize our product candidates.

In August 2018, we entered into a strategic collaboration with bluebird bio to utilize our EDGE platform to identify and validate tumor-specific targets and provide TCRs directed to ten selected targets for use in bluebird bio's cell therapy products. Under the collaboration, we are entitled to receive up to an aggregate of \$1.2 billion in development, regulatory and commercial milestones and tiered single digit royalties on sales of bluebird bio's cell therapy products utilizing the TCRs we develop directed at the targets we discovered. In addition, in the future we may seek to enter into additional collaboration arrangements for the development or commercialization of certain of our product candidates depending on the merits of retaining commercialization rights for ourselves as compared to entering into collaboration arrangements. To the extent that we decide to enter into collaboration agreements in the

future, we may face significant competition in seeking appropriate collaborators. Moreover, any collaboration arrangements are complex and time-consuming to negotiate, document, implement and maintain and challenging to manage. We may not be successful in our efforts with bluebird bio and we may never receive any milestone or royalty payments. Further, we may be unable to prudently manage our existing collaboration or to enter new ones should we chose to do so. The terms of new collaborations or other arrangements that we may establish may not be favorable to us.

The success of our collaboration arrangements will depend heavily on the efforts and activities of our collaborators. Collaborations are subject to numerous risks, which may include risks that:

- collaborators have significant discretion in determining the efforts and resources that they will apply to collaborations;
- collaborators may not pursue development and commercialization of our product candidates or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in their strategic focus due to their acquisition of competitive products or their internal development of competitive products, availability of funding or other external factors, such as a business combination that diverts resources or creates competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial, abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products or product candidates;
- a collaborator with marketing, manufacturing and distribution rights to one or more products may not commit sufficient resources to or otherwise not perform satisfactorily in carrying out these activities;
- we could grant exclusive rights to our collaborators that would prevent us from collaborating with others;
- collaborators may not properly maintain or defend our intellectual property rights or may use our intellectual property or proprietary information in a way that gives rise to actual or threatened litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential liability;
- disputes may arise between us and a collaborator that causes the delay or termination of the research, development or commercialization of our current or future product candidates or that results in costly litigation or arbitration that diverts management attention and resources;
- collaborations may be terminated, and, if terminated, this may result in a need for additional capital to pursue further development or commercialization of the applicable current or future product candidates;
- collaborators may own or co-own intellectual property covering products that result from our collaboration with them, and in such cases, we would not have the exclusive right to develop or commercialize such intellectual property;
- disputes may arise with respect to the ownership of any intellectual property developed pursuant to our collaborations; and
- a collaborator's sales and marketing activities or other operations may not be in compliance with applicable laws resulting in civil or criminal proceedings.

If we engage in future acquisitions or strategic partnerships, this may increase our capital requirements, dilute our stockholders, cause us to incur debt or assume contingent liabilities, and subject us to other risks.

We may evaluate various acquisitions and strategic partnerships, including licensing or acquiring complementary products, intellectual property rights, technologies, or businesses. Any potential acquisition or strategic partnership may entail numerous risks, including:

- increased operating expenses and cash requirements;
- the assumption of additional indebtedness or contingent liabilities;
- the issuance of our equity securities;
- assimilation of operations, intellectual property and products of an acquired company, including difficulties associated with integrating new personnel;
- the diversion of our management's attention from our existing product programs and initiatives in pursuing such a strategic merger or acquisition;
- retention of key employees, the loss of key personnel, and uncertainties in our ability to maintain key business relationships;
- risks and uncertainties associated with the other party to such a transaction, including the prospects of that party and their existing products or product candidates and regulatory approvals; and
- our inability to generate revenue from acquired technology and/or products sufficient to meet our objectives in undertaking the acquisition or even to offset the associated acquisition and maintenance costs.

In addition, if we undertake acquisitions, we may issue dilutive securities, assume or incur debt obligations, incur large one-time expenses and acquire intangible assets that could result in significant future amortization expense. Moreover, we may not be able to locate suitable acquisition opportunities and this inability could impair our ability to grow or obtain access to technology or products that may be important to the development of our business.

We or the third parties upon whom we depend may be adversely affected by earthquakes or other natural disasters and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Our corporate headquarters and certain of our other facilities, including our manufacturing facility, are located in the San Francisco Bay Area, which in the past has experienced both severe earthquakes and wildfires. We do not carry earthquake insurance. Earthquakes, wildfires or other natural disasters could severely disrupt our operations, and have a material adverse effect on our business, results of operations, financial condition and prospects.

If a natural disaster, power outage or other event occurred that prevented us from using all or a significant portion of our headquarters or other facilities, that damaged critical infrastructure, such as our enterprise financial systems or manufacturing resource planning and enterprise quality systems, or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible, for us to continue our business for a substantial period of time. The disaster recovery and business continuity plans we have in place currently are limited and are unlikely to prove adequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which, particularly when taken together with our lack of earthquake insurance, could have a material adverse effect on our business.

Furthermore, integral parties in our supply chain are similarly vulnerable to natural disasters or other sudden, unforeseen and severe adverse events. If such an event were to affect our supply chain, it could have a material adverse effect on our business.

We depend on our information technology systems, and any failure of these systems could harm our business. Security breaches, loss of data, and other disruptions could compromise sensitive information related to our business or prevent us from accessing critical information and expose us to liability, which could adversely affect our business, results of operations and financial condition.

We collect and maintain information in digital form that is necessary to conduct our business, and we are increasingly dependent on information technology systems and infrastructure to operate our business, including our laboratory information management system and our EDGE platform. In the ordinary course of our business, we collect, store and transmit large amounts of confidential information, including intellectual property, proprietary business information and personal information. It is critical that we do so in a secure manner to maintain the confidentiality and integrity of such confidential information. We have established physical, electronic and organizational measures to safeguard and secure our systems to prevent a data compromise, and rely on commercially available systems, software, tools, and monitoring to provide security for our information technology systems and the processing, transmission and storage of digital information. We have also outsourced elements of our information technology infrastructure, and as a result a number of third-party vendors may or could have access to our confidential information. Our internal information technology systems and infrastructure, and those of our current and any future collaborators, contractors and consultants and other third parties on which we rely, are vulnerable to damage from computer viruses, malware, natural disasters, terrorism, war, telecommunication and electrical failures, cyber-attacks or cyber-intrusions over the Internet, attachments to emails, persons inside our organization, or persons with access to systems inside our organization.

The risk of a security breach or disruption or data loss, particularly through cyber-attacks or cyber intrusion, including by computer hackers, foreign governments and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. In addition, the prevalent use of mobile devices that access confidential information increases the risk of data security breaches, which could lead to the loss of confidential information or other intellectual property. The costs to us to mitigate network security problems, bugs, viruses, worms, malicious software programs and security vulnerabilities could be significant, and while we have implemented security measures to protect our data security and information technology systems, our efforts to address these problems may not be successful, and these problems could result in unexpected interruptions, delays, cessation of service and other harm to our business and our competitive position. If such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our product development programs. For example, the loss of clinical trial data from completed or ongoing or planned clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Moreover, if a computer security breach affects our systems or results in the unauthorized release of personally identifiable information, our reputation could be materially damaged. In addition, such a breach may require notification to governmental agencies, the media or individuals pursuant to various federal and state privacy and security laws, if applicable, including the Health Insurance Portability and Accountability Act of 1996, or HIPAA, as amended by the Health Information Technology for Clinical Health Act of 2009, or HITECH, and its implementing rules and regulations, as well as regulations promulgated by the Federal Trade Commission and state breach notification laws. We would also be exposed to a risk of loss or litigation and potential liability, which could materially adversely affect our business, results of operations and financial condition.

Our employees and independent contractors, including principal investigators, consultants, commercial collaborators, service providers and other vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could have an adverse effect on our results of operations.

We are exposed to the risk that our employees and independent contractors, including principal investigators, consultants, any future commercial collaborators, service providers and other vendors may engage in misconduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or other unauthorized activities that violate the laws and regulations of the FDA and other similar regulatory bodies, including those laws that require the reporting of true, complete and accurate information to such regulatory bodies; manufacturing standards; U.S. federal and state healthcare fraud and abuse, data privacy laws and other similar non-U.S. laws; or laws that require the true, complete and accurate reporting of financial information or data. Activities subject to these laws also involve the improper use or misrepresentation of information obtained in the course of clinical trials, the creation of fraudulent data in our preclinical studies or clinical trials, or illegal misappropriation of product, which could result in regulatory sanctions and cause serious harm to our reputation. It is not always possible to identify and deter misconduct by employees and other third-parties, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. In addition, we are subject to the risk that a person or government could allege such fraud or other misconduct, even if none occurred. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business and financial results, including, without limitation, the imposition of significant civil, criminal and administrative penalties, damages, monetary fines, disgorgement, possible exclusion from participation in Medicare, Medicaid and other U.S. federal healthcare programs or healthcare programs in other jurisdictions, integrity oversight and reporting obligations to resolve allegations of non-compliance, individual imprisonment, other sanctions, contractual damages, reputational harm, diminished profits and future earnings and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

Our business involves the use of hazardous materials and we and our third-party manufacturers and suppliers must comply with environmental laws and regulations, which can be expensive and restrict how we do business.

Our research and development activities and our third-party manufacturers' and suppliers' activities involve the controlled storage, use and disposal of hazardous materials owned by us, including the components of our product and product candidates and other hazardous compounds. We and any third-party manufacturers and suppliers we engage are subject to numerous federal, state and local environmental, health and safety laws, regulations and permitting requirements, including those governing laboratory procedures; the generation, handling, use, storage, treatment, and disposal of hazardous and regulated materials and wastes; the emission and discharge of hazardous materials into the ground, air and water; and employee health and safety. Our operations involve the use of hazardous and flammable materials, including chemicals and biological and radioactive materials. Our operations also produce hazardous waste. In some cases, these hazardous materials and various wastes resulting from their use are stored at our and our manufacturers' facilities pending their use and disposal. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination, which could cause an interruption of our commercialization efforts, research and development efforts and business operations, environmental damage resulting in costly clean-up and liabilities under applicable laws and regulations governing the use, storage, handling and disposal of these materials and specified waste products.

Although we believe that the safety procedures utilized by our third-party manufacturers for handling and disposing of these materials generally comply with the standards prescribed by these laws and regulations, we cannot guarantee that this is the case or eliminate the risk of accidental contamination or injury from these materials. Under certain environmental laws, we could be held responsible for costs relating to any contamination at our current or past facilities and at third-party facilities. In such an event, we may be held liable for any resulting damages and such liability could exceed our resources and state or federal or other applicable authorities may curtail our use of certain materials and/or interrupt our business operations. Furthermore, environmental laws and regulations are complex, change frequently and have tended to become more stringent. We cannot predict the impact of such changes and cannot be certain of our future compliance.

Compliance with applicable environmental laws and regulations may be expensive, and current or future environmental laws and regulations may impair our research, product development and manufacturing efforts. In addition, we cannot entirely eliminate the risk of accidental injury or contamination from these materials or wastes. Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not carry specific biological or hazardous waste insurance coverage, and our property, casualty, and general liability insurance policies specifically exclude coverage for damages and fines arising from biological or hazardous waste exposure or contamination. Accordingly, in the event of contamination or injury, we could be held liable for damages or be penalized with fines in an amount exceeding our resources, and our clinical trials or regulatory approvals could be suspended, which could have a material adverse effect on our business, results of operations and financial condition.

Risks Related to Intellectual Property

Our success depends on our ability to protect our intellectual property and our proprietary technologies.

Our commercial success depends in part on our ability to obtain and maintain patent protection and trade secret protection for our product candidates, proprietary technologies and their uses as well as our ability to operate without infringing upon the proprietary rights of others. We generally seek to protect our proprietary position by filing patent applications in the United States and abroad related to our product candidates, proprietary technologies and their uses that are important to our business. Our patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless, and until, patents issues from such applications, and then only to the extent the issued claims cover the technology. There can be no assurance that our patent applications or those of our licensors will result in additional patents being issued or that issued patents will afford sufficient protection against competitors with similar technology, nor can there be any assurance that the patents issued will not be infringed, designed around or invalidated by third parties. Even issued patents may later be found invalid or unenforceable or may be modified or revoked in proceedings instituted by third parties before various patent offices or in courts. The degree of future protection for our proprietary rights is uncertain. Only limited protection may be available and may not adequately protect our rights or permit us to gain or keep any competitive advantage. If we do not adequately protect our intellectual property and proprietary technology, competitors may be able to use our product candidates and proprietary technologies and erode or negate any competitive advantage we may have, which could have a material adverse effect on our financial condition and results of operations.

We have applied, and we intend to continue applying, for patents covering aspects of our product candidates, proprietary technologies and their uses that we deem appropriate. However, we may not be able to apply for patents on certain aspects of our current or future product candidates, proprietary

technologies and their uses in a timely fashion, at a reasonable cost, in all jurisdictions, or at all, and any potential patent coverage we obtain may not be sufficient to prevent substantial competition. As of July 31, 2018, our solely owned patent portfolio includes 21 pending U.S. patent applications and 25 pending foreign patent applications and we have received a notice of issuance for our pending U.S. patent application relating to the use of a predictive model to identify neoantigens, particularly where the predictive model was trained using mass spectrometry data. We cannot be certain that the claims in any of our patent applications will be considered patentable by the United States Patent and Trademark Office, or USPTO, courts in the United States or by the patent offices and courts in foreign countries, nor can we be certain that the claims in our issued patents will not be found invalid or unenforceable if challenged.

The patent application process is subject to numerous risks and uncertainties, and there can be no assurance that we or any of our actual or potential future collaborators will be successful in protecting our product candidates, proprietary technologies and their uses by obtaining and defending patents. These risks and uncertainties include the following:

- the USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions during the patent process, the noncompliance with which can result in abandonment or lapse of a patent or patent application, and partial or complete loss of patent rights in the relevant jurisdiction;
- patent applications may not result in any patents being issued;
- patents that may be issued or in-licensed may be challenged, invalidated, modified, revoked, circumvented, found to be unenforceable or otherwise may not provide any competitive advantage;
- our competitors, many of whom have substantially greater resources than we do and many of whom have made significant investments in competing technologies, may seek or may have already obtained patents that will limit, interfere with or eliminate our ability to make, use and sell our potential product candidates;
- other parties may have designed around our claims or developed technologies that may be related or competitive to our platform, may have filed or may file patent applications and may have received or may receive patents that overlap or conflict with our patent applications, either by claiming the same methods or devices or by claiming subject matter that could dominate our patent position;
- any successful opposition to any patents owned by or licensed to us could deprive us of rights necessary for the practice of our technologies or the successful commercialization of any products or product candidates that we may develop;
- because patent applications in the United States and most other countries are confidential for a period of time after filing, we cannot be certain that we or our licensors were the first to file any patent application related to our product candidates, proprietary technologies and their uses;
- an interference proceeding can be provoked by a third party or instituted by the USPTO to determine who was the first to invent any of the subject matter covered by the patent claims of our applications for any application with an effective filing date before March 16, 2013;
- there may be significant pressure on the U.S. government and international governmental bodies to limit the scope of patent protection both inside and outside the United States for disease treatments that prove successful, as a matter of public policy regarding worldwide health concerns; and
- countries other than the United States may have patent laws less favorable to patentees than those upheld by U.S. courts, allowing foreign competitors a better opportunity to create, develop and market competing product candidates.

The patent position of biopharmaceutical companies generally is highly uncertain, involves complex legal and factual questions, and has been the subject of much litigation in recent years. Moreover, the patent prosecution process is also expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. Although we enter into non-disclosure and confidentiality agreements with parties who have access to patentable aspects of our research and development output, such as our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors and other third parties, any of these parties may breach such agreements and disclose such output before a patent application is filed, thereby jeopardizing our ability to seek patent protection.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our patents, if issued, or the patent rights that we license from others, may be challenged in the courts or patent offices in the United States and abroad. Once granted, patents may remain open to opposition, interference, re-examination, post-grant review, *inter partes* review, nullification or derivation action in court or before patent offices or similar proceedings for a given period after allowance or grant, during which time third parties can raise objections against such initial grant. Such challenges may result in loss of exclusivity or in patent claims being narrowed, invalidated or held unenforceable, which could limit our ability to stop others from using or commercializing similar or identical products, or limit the duration of the patent protection of our products and product candidates. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our intellectual property may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

Our ability to enforce our patent rights depends on our ability to detect infringement. It may be difficult to detect infringers who do not advertise the components or methods that are used in connection with their products and services. Moreover, it may be difficult or impossible to obtain evidence of infringement in a competitor's or potential competitor's product or service. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded if we were to prevail may not be commercially meaningful.

In addition, proceedings to enforce or defend our patents could put our patents at risk of being invalidated, held unenforceable or interpreted narrowly. Such proceedings could also provoke third parties to assert claims against us, including that some or all of the claims in one or more of our patents are invalid or otherwise unenforceable. If any of our patents covering our products are invalidated or found unenforceable, or if a court found that valid, enforceable patents held by third parties covered one or more of our products, our competitive position could be harmed or we could be required to incur significant expenses to enforce or defend our rights. If we initiate lawsuits to protect or enforce our patents, or litigate against third party claims, such proceedings would be expensive and would divert the attention of our management and technical personnel.

The degree of future protection for our proprietary rights is uncertain, and we cannot ensure that:

- any of our patents, or any of our pending patent applications, if issued, or those of our licensors, will include claims having a scope sufficient to protect our products;
- any of our pending patent applications or those of our licensors may issue as patents;
- others will not or may not be able to make, use, offer to sell, or sell products that are the same as or similar to our own but that are not covered by the claims of the patents that we own or license;

- we will be able to successfully commercialize our products on a substantial scale, if approved, before the relevant patents that we own or license expire;
- we were the first to make the inventions covered by each of the patents and pending patent applications that we own or license;
- we or our licensors were the first to file patent applications for these inventions;
- others will not develop similar or alternative technologies that do not infringe the patents we own or license;
- any of the patents we own or license will be found to ultimately be valid and enforceable;
- any patents issued to us or our licensors will provide a basis for an exclusive market for our commercially viable products or will provide us with any competitive advantages;
- a third party may not challenge the patents we own or license and, if challenged, a court would hold that such patents are valid, enforceable and infringed;
- we may develop or in-license additional proprietary technologies that are patentable;
- the patents of others will not have an adverse effect on our business;
- our competitors do not conduct research and development activities in countries where we do not have enforceable patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we will develop additional proprietary technologies or products that are separately patentable; or
- our commercial activities or products will not infringe upon the patents of others.

Where we obtain licenses from or collaborate with third parties, in some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology that we license from third parties, or such activities, if controlled by us, may require the input of such third parties. We may also require the cooperation of our licensors and collaborators to enforce any licensed patent rights, and such cooperation may not be provided. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. Moreover, if we do obtain necessary licenses, we will likely have obligations under those licenses, and any failure to satisfy those obligations could give our licensor the right to terminate the license. Termination of a necessary license, or expiration of licensed patents or patent applications, could have a material adverse impact on our business.

The lives of our patents may not be sufficient to effectively protect our products and business.

Patents have a limited lifespan. In the United States, the natural expiration of a patent is generally 20 years after its first effective non-provisional filing date. Although various extensions may be available, the life of a patent, and the protection it affords, is limited. Even if patents covering our product candidates, proprietary technologies and their uses are obtained, once the patent life has expired, we may be open to competition. In addition, although upon issuance in the United States a patent's life can be increased based on certain delays caused by the USPTO, this increase can be reduced or eliminated based on certain delays caused by the patent applicant during patent prosecution. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. If we do not have sufficient patent life to protect our product candidates, proprietary technologies and their uses, our business and results of operations will be adversely affected.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

We rely on the protection of our trade secrets, including unpatented know-how, technology and other proprietary information. We have taken steps to protect our trade secrets and unpatented know-how, including entering into confidentiality agreements with third parties, and confidential information and inventions agreements with employees, consultants and advisors. In addition to contractual security measures, we try to protect the confidential nature of our proprietary information using commonly accepted physical and technological security measures. Despite these efforts, we cannot provide any assurances that all such agreements have been duly executed, and any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. In addition, such security measures may not provide adequate protection for our proprietary information, for example, in the case of misappropriation of a trade secret by an employee, consultant, customer or third party with authorized access. Our security measures may not prevent an employee, consultant or customer from misappropriating our trade secrets and providing them to a competitor, and recourse we take against such misconduct may not provide an adequate remedy to protect our interests fully. Monitoring unauthorized uses and disclosures is difficult, and we do not know whether the steps we have taken to protect our proprietary technologies will be effective. Unauthorized parties may also attempt to copy or reverse engineer certain aspects of our products that we consider proprietary. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret can be difficult, expensive and time-consuming, and the outcome is unpredictable. Even though we use commonly accepted security measures, the criteria for protection of trade secrets can vary among different jurisdictions.

Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets. Moreover, third parties may still obtain this information or may come upon this or similar information independently, and we would have no right to prevent them from using that technology or information to compete with us. Trade secrets will over time be disseminated within the industry through independent development, the publication of journal articles and the movement of personnel skilled in the art from company to company or academic to industry scientific positions. Though our agreements with third parties typically restrict the ability of our advisors, employees, collaborators, licensors, suppliers, third-party contractors and consultants to publish data potentially relating to our trade secrets, our agreements may contain certain limited publication rights. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent such competitor from using that technology or information to compete with us, which could harm our competitive position. Because from time to time we expect to rely on third parties in the development, manufacture, and distribution of our products and provision of our services, we must, at times, share trade secrets with them. Despite employing the contractual and other security precautions described above, the need to share trade secrets increases the risk that such trade secrets become known by our competitors, are inadvertently incorporated into the technology of others, or are disclosed or used in violation of these agreements. If any of these events occurs or if we otherwise lose protection for our trade secrets, the value of this information may be greatly reduced and our competitive position would be harmed. If we do not apply for patent protection prior to such publication or if we cannot otherwise maintain the confidentiality of our proprietary technology and other confidential information, then our ability to obtain patent protection or to protect our trade secret information may be jeopardized.

Our rights to develop and commercialize our product candidates are subject in part to the terms and conditions of licenses granted to us by other companies. The patent protection, prosecution and enforcement for some of our product candidates may be dependent on third parties.

We currently are reliant upon licenses of certain patent rights and proprietary technology from third parties that is important or necessary to the development of our technology and products, including technology related to our product candidates. For example, we rely on our license agreement with Arbutus Biopharma Corporation for certain lipid nanoparticle-based delivery technologies. This and other licenses we may enter into in the future may not provide adequate rights to use such intellectual property and technology in all relevant fields of use or in all territories in which we may wish to develop or commercialize our technology and products in the future. As a result, we may not be able to develop and commercialize our technology and products in fields of use and territories for which we are not granted rights pursuant to such licenses.

Licenses to additional third-party technology that may be required for our development programs may not be available in the future or may not be available on commercially reasonable terms, which could have a material adverse effect on our business and financial condition.

In some circumstances, we may not have the right to control the preparation, filing, prosecution and enforcement of patent applications, or to maintain the patents, covering technology that we license from third parties. In addition, some of our agreements with our licensors require us to obtain consent from the licensor before we can enforce patent rights, and our licensor may withhold such consent or may not provide it on a timely basis. Therefore, we cannot be certain that our licensors or collaborators will prosecute, maintain, enforce and defend such intellectual property rights in a manner consistent with the best interests of our business, including by taking reasonable measures to protect the confidentiality of know-how and trade secrets, or by paying all applicable prosecution and maintenance fees related to intellectual property registrations for any of our product candidates. We also cannot be certain that our licensors have drafted or prosecuted the patents and patent applications licensed to us in compliance with applicable laws and regulations, which may affect the validity and enforceability of such patents or any patents that may issue from such applications. If they fail to do so, this could cause us to lose rights in any applicable intellectual property that we in-license, and as a result our ability to develop and commercialize products or product candidates may be adversely affected and we may be unable to prevent competitors from making, using and selling competing products.

Our current licenses, and our future licenses likely will, impose various royalty payments, milestones, and other obligations on us. If we fail to comply with any of these obligations, we may be required to pay damages and the licensor may have the right to terminate the license. Termination by the licensor would cause us to lose valuable rights, and could prevent us from developing and commercializing our product candidates and proprietary technologies. Our business would suffer if any current or future licenses terminate, if the licensors fail to abide by the terms of the license, if the licensors fail to enforce licensed patents against infringing third parties, if the licensed patents or other rights are found to be invalid or unenforceable, or if we are unable to enter into necessary licenses on acceptable terms. Furthermore, if any current or future licenses terminate, or if the underlying patents fail to provide the intended exclusivity, competitors or other third parties may gain the freedom to seek regulatory approval of, and to market, products identical to ours. Moreover, our licensors may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing or otherwise violating the licensor's rights. In addition, while we cannot currently determine the amount of the royalty obligations we would be required to pay on sales of future products, if any, the amounts may be significant. The amount of our future royalty obligations will depend on the technology and intellectual property we use in products that we successfully develop and commercialize, if any. Therefore, even if we successfully develop and commercialize products, we may be unable to achieve or maintain profitability.

Litigation or other proceedings or third-party claims of intellectual property infringement could require us to spend significant time and money and could prevent us from selling our products.

Our commercial success depends significantly on our ability to operate without infringing the patents and other proprietary rights of third parties. However, our research, development and commercialization activities may be subject to claims that we infringe or otherwise violate patents or other intellectual property rights owned or controlled by third parties. Claims by third parties that we infringe their proprietary rights may result in liability for damages or prevent or delay our developmental and commercialization efforts. We cannot assure you that our operations do not, or will not in the future, infringe existing or future patents.

Other entities may have or obtain patents or proprietary rights that could limit our ability to make, use, sell, offer for sale or import our product candidates and future approved products or impair our competitive position. There is a substantial amount of litigation, both within and outside the United States, involving patent and other intellectual property rights in the biotechnology and pharmaceutical industries, including patent infringement lawsuits, interferences, oppositions, reexaminations, *inter partes* review proceedings and post-grant review proceedings before the USPTO and/or corresponding foreign patent offices. Numerous third-party U.S. and foreign issued patents and pending patent applications exist in the fields in which we are developing product candidates. There may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our product candidates. For example, we are aware of U.S. Serial Nos. 15/187,174 and 14/794,449, expiring in May 2031 (absent any patent term adjustments or extensions), directed to certain methods of identifying and using neoantigens. If a patent issues from such patent applications with claims similar to those that are currently pending, our ability to commercialize GRANITE-001 in the United States may be adversely affected if we do not obtain a license under such patent. In addition, we are aware of and have timely opposed EP Patent 2569633, expiring in May 2031 (absent any patent term adjustments or extensions), directed to certain methods of identifying and using neoantigens. EP Patent 2569633 is currently validated in Great Britain, France, Germany, Netherlands, Italy, Ireland, Spain and Switzerland. Our opposition was filed in the company's name on November 7, 2016 by Vossius & Partner. Four other parties also filed oppositions to the patent within the required timeframe. The European Patent Office has currently issued a Preliminary Opinion. The Preliminary Opinion, issued by the Opposition Division in December 2017, tentatively opines that EP Patent 2569633 at least does not meet the requirements of Article 123(2) of the European Patent Convention, or EPC, and that consequently, the patent would have to be revoked under Article 101(2) of the EPC. If EP Patent 2569633 is ultimately maintained by the Opposition Division with claims similar to those that are currently opposed, our ability to commercialize GRANITE-001 in certain European countries may be adversely affected if we do not obtain a license under the patent.

Furthermore, the scope of a patent claim is determined by an interpretation of the law, the written disclosure in a patent and the patent's prosecution history and can involve other factors such as expert opinion. Our interpretation of the relevance or the scope of claims in a patent or a pending application may be incorrect, which may negatively impact our ability to market our products. Further, we may incorrectly determine that our technologies, products, or product candidates are not covered by a third party patent or may incorrectly predict whether a third party's pending patent application will issue with claims of relevant scope. Our determination of the expiration date of any patent in the United States or abroad that we consider relevant may be incorrect, which may negatively impact our ability to develop and market our products or product candidates.

As the biotechnology industry expands and more patents are issued, the risk increases that our product candidates may be subject to claims of infringement of the patent rights of third parties. Our competitors in both the United States and abroad, many of which have substantially greater resources and have made substantial investments in patent portfolios and competing technologies, may have

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applied for or obtained or may in the future apply for and obtain, patents that will prevent, limit or otherwise interfere with our ability to make, use and sell our product candidates. We do not always conduct independent reviews of pending patent applications of and patents issued to third parties.

Patent applications in the United States and elsewhere are typically published approximately 18 months after the earliest filing for which priority is claimed, with such earliest filing date being commonly referred to as the priority date. Certain U.S. applications that will not be filed outside the United States can remain confidential until patents issue. In addition, patent applications in the United States and elsewhere can be pending for many years before issuance, or unintentionally abandoned patents or applications can be revived. Furthermore, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover our technologies, our product candidates or the use of our product candidates. As such, there may be applications of others now pending or recently revived patents of which we are unaware. These applications may later result in issued patents, or the revival of previously abandoned patents, that will prevent, limit or otherwise interfere with our ability to make, use or sell our products. Because patent applications are maintained as confidential for a certain period of time, until the relevant application is published we may be unaware of third-party patents that may be infringed by commercialization of GRANITE-001, SLATE-001 or our other product candidates, and cannot be certain that we were the first to file a patent application related to a product candidate or technology. Moreover, because patent applications can take many years to issue, there may be currently-pending patent applications that may later result in issued patents that our product candidates may infringe. In addition, identification of third-party patent rights that may be relevant to our technology is difficult because patent searching is imperfect due to differences in terminology among patents, incomplete databases and the difficulty in assessing the meaning of patent claims. Any claims of patent infringement asserted by third parties would be time consuming and could:

- result in costly litigation;
- divert the time and attention of our technical personnel and management;
- cause development delays;
- prevent us from commercializing GRANITE-001, SLATE-001 or our other product candidates until the asserted patent expires or is held finally invalid or not infringed in a court of law;
- require us to develop non-infringing technology, which may not be possible on a cost-effective basis;
- require us to pay damages to the party whose intellectual property rights we may be found to be infringing, which may include treble damages if we are found to have been willfully infringing such intellectual property;
- require us to pay the attorney's fees and costs of litigation to the party whose intellectual property rights we may be found to be infringing; and/or
- require us to enter into royalty or licensing agreements, which may not be available on commercially reasonable terms, or at all.

Although no third party has asserted a claim of patent infringement against us as of the date of this prospectus, others may hold proprietary rights that could prevent GRANITE-001, SLATE-001 or any future immunotherapy candidates from being marketed. Any patent-related legal action against us claiming damages and seeking to enjoin commercial activities relating to our product candidates or processes could subject us to potential liability for damages, including treble damages if we were determined to willfully infringe, and require us to obtain a license to manufacture or market GRANITE-001, SLATE-001 or any future immunotherapy candidates. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. We cannot predict whether we would prevail in

any such actions or that any license required under any of these patents would be made available on commercially acceptable terms, if at all. Even if such licenses are available, we could incur substantial costs related to royalty payments for licenses obtained from third parties, which could negatively affect our gross margins, and the rights may be non-exclusive, which could give our competitors access to the same technology or intellectual property rights licensed to us. In addition, we cannot be certain that we could redesign our product candidates or processes to avoid infringement, if necessary. Accordingly, an adverse determination in a judicial or administrative proceeding, or the failure to obtain necessary licenses, could prevent us from developing and commercializing GRANITE-001, SLATE-001 or any future immunotherapy candidates, which could harm our business, financial condition and operating results. In addition, intellectual property litigation, regardless of its outcome, may cause negative publicity and could prohibit us from marketing or otherwise commercializing our product candidates and technology.

If we collaborate with third parties in the development of technology in the future, our collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to litigation or potential liability. Further, collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability. Also, we may be obligated under our agreements with our collaborators, licensors, suppliers and others to indemnify and hold them harmless for damages arising from intellectual property infringement by us.

We may be involved in lawsuits to protect or enforce our patents or the patents of our licensors, which could be expensive, time consuming, and unsuccessful. Further, our issued patents could be found invalid or unenforceable if challenged in court.

Competitors may infringe our intellectual property rights or those of our licensors. To prevent infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. In addition, in a patent infringement proceeding, a court may decide that a patent we own or in-license is not valid, is unenforceable and/or is not infringed. If we or any of our potential future collaborators were to initiate legal proceedings against a third party to enforce a patent directed at one of our product candidates, the defendant could counterclaim that our patent is invalid and/or unenforceable in whole or in part. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge include an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness or non-enablement. Grounds for an unenforceability assertion could include an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO or made a misleading statement during prosecution. Third parties may also raise similar claims before the USPTO, even outside the context of litigation. Similar mechanisms for challenging the validity and enforceability of a patent exist in ex-U.S. patent offices and may result in the revocation, cancellation, or amendment of any ex-U.S. patents we hold in the future. The outcome following legal assertions of invalidity and unenforceability is unpredictable, and prior art could render our patents or those of our licensors invalid. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on such product candidate. Such a loss of patent protection would have a material adverse impact on our business.

Interference or derivation proceedings provoked by third parties or brought by us or declared by the USPTO may be necessary to determine the priority of inventions with respect to our patents or patent applications or those of our licensors. An unfavorable outcome could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms or at all,

or if a non-exclusive license is offered and our competitors gain access to the same technology. Our defense of litigation or interference proceedings may fail and, even if successful, may result in substantial costs and distract our management and other employees. In addition, the uncertainties associated with litigation could have a material adverse effect on our ability to raise the funds necessary to continue our clinical trials, continue our research programs, license necessary technology from third parties or enter into development or manufacturing partnerships that would help us bring our product candidates to market.

Even if resolved in our favor, litigation or other legal proceedings relating to our intellectual property rights may cause us to incur significant expenses, and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could compromise our ability to compete in the marketplace.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a material adverse effect on the price of our common stock.

We may not be successful in obtaining or maintaining necessary rights to our product candidates through acquisitions and in-licenses.

We currently have rights to the intellectual property, through licenses from third parties and under patents that we own, to develop our product candidates. Because our programs may require the use of proprietary rights held by third parties, the growth of our business will depend in part on our ability to acquire, in-license or use these proprietary rights. We may be unable to acquire or in-license any compositions, methods of use, processes or other third-party intellectual property rights from third parties that we identify as necessary for our product candidates. The licensing and acquisition of third-party intellectual property rights is a competitive area, and a number of more established companies are also pursuing strategies to license or acquire third-party intellectual property rights that we may consider attractive. These established companies may have a competitive advantage over us due to their size, cash resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment.

We have collaborated with U.S. academic institutions and may in the future collaborate with U.S. and foreign academic institutions to accelerate our preclinical research or development under written agreements with these institutions. These institutions may provide us with an option to negotiate a license to any of the institution's rights in technology resulting from the collaboration. Regardless of such option, we may be unable to negotiate a license within the specified timeframe or under terms that are acceptable to us. If we are unable to do so, the institution may offer the intellectual property rights to other parties, potentially blocking our ability to pursue our program.

If we are unable to successfully obtain rights to required third-party intellectual property rights or maintain the existing intellectual property rights we have, we may have to abandon development of that program and our business and financial condition could suffer.

We may fail to comply with any of our obligations under existing or future agreements pursuant to which we license or have otherwise acquired intellectual property rights or technology, which could result in the loss of rights or technology that are material to our business.

We are party to various agreements that we depend on to operate our business, including intellectual property rights relating to GRANITE-001 and SLATE-001, in particular, our agreement with Arbutus. Our rights to use currently licensed intellectual property or intellectual property to be licensed in the future are subject to the continuation of and our compliance with the terms of these agreements. Disputes may arise regarding our rights to intellectual property licensed to us from a third party, including but not limited to:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- the sublicensing of patent and other rights;
- our diligence obligations under the license agreement and what activities satisfy those diligence obligations;
- the ownership of inventions and know-how resulting from the creation or use of intellectual property by us, alone or with our licensors and collaborators;
- the scope and duration of our payment obligations;
- our rights upon termination of such agreement; and
- the scope and duration of exclusivity obligations of each party to the agreement.

If disputes over intellectual property and other rights that we have licensed or acquired from third parties prevent or impair our ability to maintain our current license agreements on acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates. If we fail to comply with our obligations under current or future license agreements, these agreements may be terminated or the scope of our rights under them may be reduced and we might be unable to develop, manufacture or market any product that is licensed under these agreements.

We may be subject to claims that we have wrongfully hired an employee from a competitor or that we or our employees have wrongfully used or disclosed alleged confidential information or trade secrets of their former employers.

As is common in the biotechnology and biopharmaceutical industries, in addition to our employees, we engage the services of consultants to assist us in the development of our product candidates. Many of these consultants, and many of our employees, were previously employed at, or may have previously provided or may be currently providing consulting services to, other biotechnology or biopharmaceutical companies including our competitors or potential competitors. Although we try to ensure that our employees and consultants do not use the proprietary information or know-how of others in their work for us, we may become subject to claims that we, our employees or a consultant inadvertently or otherwise used or disclosed trade secrets or other information proprietary to their former employers or their former or current clients. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, which could adversely affect our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to our management team.

We may be subject to claims challenging the inventorship or ownership of our patents and other intellectual property.

We may also be subject to claims that former employees, collaborators or other third parties have an ownership interest in our patents or other intellectual property. In addition, we may face claims by third parties that our agreements with employees, contractors or consultants obligating them to assign intellectual property to us are ineffective or in conflict with prior or competing contractual obligations of assignment, which could result in ownership disputes regarding intellectual property we have developed or will develop and interfere with our ability to capture the commercial value of such intellectual property. Litigation may be necessary to defend against these and other claims challenging inventorship or ownership. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and distraction to management and other employees.

If we do not obtain patent term extension for our product candidates, our business may be materially harmed.

Depending upon the timing, duration and specifics of FDA marketing approval of GRANITE-001, SLATE-001 or any future immunotherapy candidates, one or more of our U.S. patents may be eligible for limited patent term restoration under the Drug Price Competition and Patent Term Restoration Act of 1984, also known as the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. The Hatch-Waxman Act allows a maximum of one patent to be extended per FDA approved product as compensation for the patent term lost during the FDA regulatory review process. A patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only those claims covering such approved drug product, a method for using it or a method for manufacturing it may be extended. Patent term extension may also be available in certain foreign countries upon regulatory approval of our product candidates. However, we may not be granted an extension because of, for example, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request. If we are unable to obtain patent term extension or restoration or the term of any such extension is less than we request, our competitors may obtain approval of competing products following our patent expiration, and our revenue could be reduced, possibly materially.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

Our registered or unregistered trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names, which we need to build name recognition among potential partners or customers in our markets of interest. At times, competitors may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trade name or trademark infringement claims brought by owners of other trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected. We may license our trademarks and trade names to third parties, such as distributors. Though these license agreements may provide guidelines for how our trademarks and trade names may be used, a breach of these agreements or

misuse of our trademarks and tradenames by our licensees may jeopardize our rights in or diminish the goodwill associated with our trademarks and trade names. Our efforts to enforce or protect our proprietary rights related to trademarks, trade names, trade secrets, domain names, copyrights or other intellectual property may be ineffective and could result in substantial costs and diversion of resources and could adversely affect our financial condition or results of operations.

Changes in patent law in the U.S. or in other countries could diminish the value of patents in general, thereby impairing our ability to protect our product candidates.

Our patent rights may be affected by developments or uncertainty in U.S. or ex-U.S. patent statutes, patent case laws in USPTO rules and regulations or in the rules and regulations of ex-U.S. patent offices. There are a number of recent changes to the U.S. patent laws that may have a significant impact on our ability to protect our technology and enforce our intellectual property rights. For example, on September 16, 2011, the Leahy-Smith America Invents Act, or Leahy-Smith Act, was signed into law. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications will be prosecuted and may also affect patent litigation. In particular, under the Leahy-Smith Act, the United States transitioned in March 2013 to a “first to file” system in which the first inventor to file a patent application will be entitled to the patent. Third parties are allowed to submit prior art before the issuance of a patent by the USPTO, and may become involved in post-grant proceedings including opposition, derivation, reexamination, *inter partes* review or interference proceedings challenging our patent rights or the patent rights of others. An adverse determination in any such submission, proceeding or litigation could reduce the scope or enforceability of, or invalidate, our patent rights, which could adversely affect our competitive position. This could have a negative impact on some of our intellectual property and could increase uncertainties surrounding obtaining and enforcement or defense of our issued patents. In addition, Congress may pass patent reform legislation that is unfavorable to us. The Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by Congress, the federal courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents we might obtain in the future.

Similarly, statutory or judicial changes to the patent laws of other countries may increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting and defending all current and future patents in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection but enforcement is not as strong as that in the United States. These products may compete with our product candidates, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

The legal systems of many foreign countries do not favor the enforcement of patents and other intellectual property protection, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights. For example, some foreign countries have compulsory licensing laws under which a patent owner must grant licenses to third parties. In addition, some countries limit the enforceability of patents against third parties, including government agencies or government contractors. In these countries, patents may provide limited or no benefit. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Obtaining and maintaining patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions during the patent process. Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and/or applications will be due to be paid to the USPTO and various governmental patent agencies outside of the US in several stages over the lifetime of the patents and/or applications. We employ reputable professionals and rely on such third parties to help us comply with these requirements and effect payment of these fees with respect to the patents and patent applications that we own, and if we license intellectual property we may have to rely upon our licensors to comply with these requirements and effect payment of these fees with respect to any patents and patent applications that we license. In many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. However, there are situations in which noncompliance can result in abandonment or lapse of a patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, competitors might be able to enter the market earlier than would otherwise have been the case.

Intellectual property rights do not necessarily address all potential threats to our competitive advantage.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect our business or permit us to maintain our competitive advantage. For example:

- others may be able to make personalized cancer immunotherapies that are similar to ours but that are not covered by the claims of the patents that we own or have exclusively licensed;
- we or our licensors or future collaborators might not have been the first to make the inventions covered by the issued patents or pending patent applications that we own or have exclusively licensed;
- we or our licensors or future collaborators might not have been the first to file patent applications covering certain of our inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;

- it is possible that our pending patent applications will not lead to issued patents;
- issued patents that we own or have exclusively licensed may be held invalid or unenforceable, as a result of legal challenges by our competitors;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable; and
- the patents of others may have an adverse effect on our business.

Should any of these events occur, they could significantly harm our business, results of operations and prospects.

Risks Related to Government Regulation

Even if we obtain regulatory approval for a product candidate, our products will remain subject to regulatory scrutiny.

If one of our product candidates is approved, it will be subject to ongoing regulatory requirements for manufacturing, labeling, packaging, storage, advertising, promotion, sampling, record-keeping, conduct of post-marketing studies, and submission of safety, efficacy, and other post-market information, including both federal and state requirements in the United States and requirements of comparable foreign regulatory authorities.

Manufacturers and manufacturers' facilities are required to comply with extensive FDA and comparable foreign regulatory authority requirements, including ensuring that quality control and manufacturing procedures conform to cGMP regulations. As such, we and our contract manufacturers will be subject to continual review and inspections to assess compliance with cGMP and adherence to commitments made in any approved marketing application. Accordingly, we and others with whom we work must continue to expend time, money, and effort in all areas of regulatory compliance, including manufacturing, production, and quality control.

We will have to comply with requirements concerning advertising and promotion for our products. Promotional communications with respect to prescription drugs and biologics are subject to a variety of legal and regulatory restrictions and must be consistent with the information in the product's approved label. As such, we may not promote our products "off-label" for indications or uses for which they do not have approval. The holder of an approved application must submit new or supplemental applications and obtain approval for certain changes to the approved product, product labeling, or manufacturing process. We could also be asked to conduct post-marketing clinical studies to verify the safety and efficacy of our products in general or in specific patient subsets. An unsuccessful post-marketing study or failure to complete such a study could result in the withdrawal of marketing approval.

If a regulatory agency discovers previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, or disagrees with the promotion, marketing or labeling of a product, such regulatory agency may impose restrictions on that product or us, including requiring withdrawal of the product from the market. If we fail to comply with applicable regulatory requirements, a regulatory agency or enforcement authority may, among other things:

- issue warning letters;

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- impose civil or criminal penalties;
- suspend or withdraw regulatory approval;
- suspend any of our clinical studies;
- refuse to approve pending applications or supplements to approved applications submitted by us;
- impose restrictions on our operations, including closing our contract manufacturers' facilities; or
- seize or detain products, or require a product recall.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response, and could generate negative publicity. Any failure to comply with ongoing regulatory requirements may significantly and adversely affect our ability to commercialize and generate revenue from our products. If regulatory sanctions are applied or if regulatory approval is withdrawn, the value of our company and our operating results will be adversely affected.

Moreover, the policies of the FDA and of other regulatory authorities may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. For example, certain policies of the Trump administration may impact our business and industry. Namely, the Trump administration has taken several executive actions, including the issuance of a number of Executive Orders, that could impose significant burdens on, or otherwise materially delay, FDA's ability to engage in routine oversight activities such as implementing statutes through rulemaking, issuance of guidance, and review and approval of marketing applications. It is difficult to predict how these orders will be implemented, and the extent to which they will impact the FDA's ability to exercise its regulatory authority. If these executive actions impose restrictions on FDA's ability to engage in oversight and implementation activities in the normal course, our business may be negatively impacted. In addition, if we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

We may seek orphan drug designation for certain future product candidates, but we may be unable to obtain such designations or to maintain the benefits associated with orphan drug designation, including market exclusivity, which may cause our revenue, if any, to be reduced.

We may pursue orphan drug designation for certain of our future product candidates. Under the Orphan Drug Act, the FDA may designate a drug or biologic product as an orphan drug if it is intended to treat a rare disease or condition, defined as a patient population of fewer than 200,000 in the United States, or a patient population greater than 200,000 in the United States where there is no reasonable expectation that the cost of developing the drug will be recovered from sales in the United States. In the European Union, the EMA's Committee for Orphan Medicinal Products, or COMP, grants orphan drug designation to promote the development of products that are intended for the diagnosis, prevention, or treatment of a life-threatening or chronically debilitating condition affecting not more than five in 10,000 persons in the European Union. Additionally, designation is granted for products intended for the diagnosis, prevention, or treatment of a life-threatening, seriously debilitating or serious and chronic condition when, without incentives, it is unlikely that sales of the drug in the European Union would be sufficient to justify the necessary investment in developing the drug or biological product or where there is no satisfactory method of diagnosis, prevention, or treatment, or, if such a method exists, the medicine must be of significant benefit to those affected by the condition.

In the United States, orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages, and application fee waivers. In addition, if a product receives the first FDA approval for the indication for which it has orphan designation, the product is entitled to orphan drug exclusivity, which means the FDA may not approve any other application to market the same drug for the same indication for a period of seven years, except in limited circumstances, such as a showing of clinical superiority over the product with orphan exclusivity or where the manufacturer is unable to assure sufficient product quantity the orphan patient population. In the European Union, orphan drug designation entitles a party to financial incentives such as reduction of fees or fee waivers and ten years of market exclusivity following drug or biological product approval. This period may be reduced to six years if the orphan drug designation criteria are no longer met, including where it is shown that the product is sufficiently profitable not to justify maintenance of market exclusivity.

Even if we obtain orphan drug designation, we may not be the first to obtain marketing approval for any particular orphan indication due to the uncertainties associated with developing pharmaceutical products. Further, even if we obtain orphan drug exclusivity for a product candidate, that exclusivity may not effectively protect the product from competition because different drugs with different active moieties can be approved for the same condition. Even after an orphan drug is approved, the FDA or EMA can subsequently approve the same drug with the same active moiety for the same condition if the FDA or EMA concludes that the later drug is clinically superior in that it is safer, more effective, or makes a major contribution to patient care. Orphan drug designation neither shortens the development time or regulatory review time of a drug or biologic nor gives the drug or biologic any advantage in the regulatory review or approval process.

Enacted and future healthcare legislation may increase the difficulty and cost for us to obtain marketing approval of and commercialize our product candidates and may affect the prices we may set.

In the United States, the European Union and other jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes and proposed changes to the healthcare system that could affect our future results of operations. In particular, there have been and continue to be a number of initiatives at the U.S. federal and state levels that seek to reduce healthcare costs and improve the quality of healthcare. For example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively the ACA, was enacted, which substantially changed the way healthcare is financed by both governmental and private payors. Among the provisions of the ACA, those of greatest importance to the pharmaceutical and biotechnology industries include the following:

- an annual, non-deductible fee payable by any entity that manufactures or imports certain branded prescription drugs and biologic agents (other than those designated as orphan drugs), which is apportioned among these entities according to their market share in certain government healthcare programs;
- new requirements to report certain financial arrangements with physicians and teaching hospitals, including reporting “transfers of value” made or distributed to prescribers and other healthcare providers and reporting investment interests held by physicians and their immediate family members;
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to certain individuals with income at or below 133% of the federal poverty level, thereby potentially increasing a manufacturer’s Medicaid rebate liability;

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- a licensure framework for follow on biologic products;
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research; and
- establishment of a Center for Medicare Innovation at the Centers for Medicare & Medicaid Services, or CMS, to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending.

Since its enactment, there have been judicial and Congressional challenges to certain aspects of the ACA, and we expect there will be additional challenges and amendments to the ACA in the future. For example, the Tax Cuts and Jobs Act of 2017 was enacted, which includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate". Since the enactment of the Tax Cuts and Jobs Act of 2017, there have been additional amendments to certain provisions of the ACA, and we expect the current Trump administration and Congress will likely continue to seek to modify, repeal, or otherwise invalidate all, or certain provisions of, the ACA. It is uncertain the extent to which any such changes may impact our business or financial condition.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted. In August 2011, the Budget Control Act of 2011, among other things, led to aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect in April 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2027 unless additional action is taken by Congress. In January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws or any other similar laws introduced in the future may result in additional reductions in Medicare and other health care funding, which could negatively affect our customers and accordingly, our financial operations.

Moreover, payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives. For example, CMS may develop new payment and delivery models, such as bundled payment models. In addition, recently there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several U.S. Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under government payor programs, and review the relationship between pricing and manufacturer patient programs. The Trump administration's budget proposal for fiscal year 2019 contains further drug price control measures that could be enacted during the 2019 budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid, and to eliminate cost sharing for generic drugs for low-income patients. Further, the Trump administration released a "Blueprint", or plan, to lower drug prices and reduce out of pocket costs of drugs that contains additional proposals to increase drug manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products, and reduce the out of pocket costs of drug products paid by consumers. The Department of Health and Human Services, or HHS, has already started the process of soliciting feedback on some of these measures and, at the same time, is immediately implementing others under its existing authority. While some proposed measures will require authorization through additional legislation to become effective, Congress and the Trump administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. We expect that

additional U.S. federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that the U.S. federal government will pay for healthcare products and services, which could result in reduced demand for our product candidates or additional pricing pressures.

Individual states in the United States have also increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. Legally mandated price controls on payment amounts by third-party payors or other restrictions could harm our business, results of operations, financial condition and prospects. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. This could reduce the ultimate demand for our product candidates or put pressure on our product pricing.

In the European Union, similar political, economic and regulatory developments may affect our ability to profitably commercialize our product candidates, if approved. In addition to continuing pressure on prices and cost containment measures, legislative developments at the European Union or member state level may result in significant additional requirements or obstacles that may increase our operating costs. The delivery of healthcare in the European Union, including the establishment and operation of health services and the pricing and reimbursement of medicines, is almost exclusively a matter for national, rather than European Union, law and policy. National governments and health service providers have different priorities and approaches to the delivery of health care and the pricing and reimbursement of products in that context. In general, however, the healthcare budgetary constraints in most European Union member states have resulted in restrictions on the pricing and reimbursement of medicines by relevant health service providers. Coupled with ever-increasing European Union and national regulatory burdens on those wishing to develop and market products, this could prevent or delay marketing approval of our product candidates, restrict or regulate post-approval activities and affect our ability to commercialize our product candidates, if approved. In markets outside of the United States and European Union, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies.

We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action in the United States, the European Union or any other jurisdiction. If we or any third parties we may engage are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we or such third parties are not able to maintain regulatory compliance, our product candidates may lose any regulatory approval that may have been obtained and we may not achieve or sustain profitability.

Our business operations and current and future relationships with investigators, healthcare professionals, consultants, third-party payors, patient organizations and customers will be subject to applicable healthcare regulatory laws, which could expose us to penalties.

Our business operations and current and future arrangements with investigators, healthcare professionals, consultants, third-party payors, patient organizations and customers, may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations. These laws may constrain the business or financial arrangements and relationships through which we conduct our operations, including how we research, market, sell and distribute our product candidates, if approved. Such laws include:

- the U.S. federal Anti-Kickback Statute, which prohibits, among other things, persons or entities from knowingly and willfully soliciting, offering, receiving or providing any remuneration

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(including any kickback, bribe, or certain rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, lease, order or recommendation of, any good, facility, item or service, for which payment may be made, in whole or in part, under any U.S. federal healthcare program, such as Medicare and Medicaid. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;

- the U.S. federal civil and criminal false claims and civil monetary penalties laws, including the civil False Claims Act, which prohibit, among other things, including through civil whistleblower or qui tam actions, individuals or entities from knowingly presenting, or causing to be presented, to the U.S. federal government, claims for payment or approval that are false or fraudulent, knowingly making, using or causing to be made or used, a false record or statement material to a false or fraudulent claim, or from knowingly making a false statement to avoid, decrease or conceal an obligation to pay money to the U.S. federal government. Pharmaceutical manufacturers can cause false claims to be presented to the U.S. federal government by engaging in impermissible marketing practices, such as the off-label promotion of a product for an indication for which it has not received FDA approval. In addition, the government may assert that a claim including items and services resulting from a violation of the U.S. federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act;
- HIPAA, which imposes criminal and civil liability for, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement, in connection with the delivery of, or payment for, healthcare benefits, items or services. Similar to the U.S. federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the healthcare fraud statute implemented under HIPAA or specific intent to violate it in order to have committed a violation;
- HIPAA, as amended by HITECH, and its implementing regulations, which also imposes certain obligations, including mandatory contractual terms, with respect to safeguarding the privacy and security of individually identifiable health information of covered entities subject to the rule, such as health plans, healthcare clearinghouses and certain healthcare providers as well as their business associates, independent contractors of a covered entity that perform certain services involving the use or disclosure of individually identifiable health information on their behalf;
- the FDCA, which prohibits, among other things, the adulteration or misbranding of drugs, biologics and medical devices;
- the U.S. Public Health Service Act, which prohibits, among other things, the introduction into interstate commerce of a biological product unless a biologics license is in effect for that product;
- the U.S. Physician Payments Sunshine Act and its implementing regulations, which requires certain manufacturers of drugs, devices, biologics and medical supplies that are reimbursable under Medicare, Medicaid, or the Children's Health Insurance Program, with specific exceptions, to report annually to the government information related to certain payments and other transfers of value to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members;
- analogous U.S. state laws and regulations, including: state anti-kickback and false claims laws, which may apply to our business practices, including but not limited to, research, distribution, sales and marketing arrangements and claims involving healthcare items or services reimbursed by any third-party payor, including private insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance

guidelines and the relevant compliance guidance promulgated by the U.S. federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state laws and regulations that require drug manufacturers to file reports relating to pricing and marketing information, which requires tracking gifts and other remuneration and items of value provided to healthcare professionals and entities; state and local laws requiring the registration of pharmaceutical sales representatives; and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts; and

- the U.S. Foreign Corrupt Practices Act of 1977, as amended, which prohibits, among other things, U.S. companies and their employees and agents from authorizing, promising, offering, or providing, directly or indirectly, corrupt or improper payments or anything else of value to foreign government officials, employees of public international organizations and foreign government owned or affiliated entities, candidates for foreign political office, and foreign political parties or officials thereof;
- similar healthcare laws and regulations in the European Union and other jurisdictions, including reporting requirements detailing interactions with and payments to healthcare providers.

Ensuring that our internal operations and future business arrangements with third parties comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices do not comply with current or future statutes, regulations, agency guidance or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of the laws described above or any other governmental laws and regulations that may apply to us, we may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, exclusion from government-funded healthcare programs, such as Medicare and Medicaid or similar programs in other countries or jurisdictions, integrity oversight and reporting obligations to resolve allegations of non-compliance, disgorgement, individual imprisonment, contractual damages, reputational harm, diminished profits and the curtailment or restructuring of our operations. If any of the physicians or other providers or entities with whom we expect to do business are found to not be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs and imprisonment, which could affect our ability to operate our business. Further, defending against any such actions can be costly, time-consuming and may require significant personnel resources. Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired.

Risks Related to Our Common Stock and This Offering

Our stock price may be volatile and you may not be able to resell shares of our common stock at or above the price you paid.

The trading price of our common stock following this offering could be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. These factors include those discussed in this "Risk Factors" section of this prospectus and others such as:

- results from, and any delays in, our clinical trials for GRANITE-001, SLATE-001 or any other future clinical development programs, including public misperception of the results of our trials;
- announcements by academic or other third parties challenging the fundamental premises underlying our approach to treating cancer and/or biopharmaceutical product development;
- announcements of regulatory approval or disapproval of our current or any future product candidates;

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- failure or discontinuation of any of our research and development programs;
- manufacturing setbacks or delays of or issues with the supply of the materials for our personalized immunotherapy candidate;
- announcements relating to future licensing, collaboration or development agreements, including the early termination or failure of an existing strategic collaboration;
- delays in the commercialization of our current or any future product candidates;
- public misperception regarding the use of our therapies;
- acquisitions and sales of new products, technologies or businesses;
- quarterly variations in our results of operations or those of our future competitors;
- changes in earnings estimates or recommendations by securities analysts;
- announcements by us or our competitors of new products, significant contracts, commercial relationships, acquisitions or capital commitments;
- developments with respect to intellectual property rights;
- our commencement of, or involvement in, litigation;
- changes in financial estimates or guidance, including our ability to meet our future revenue and operating profit or loss estimates or guidance;
- any major changes in our board of directors or management;
- new legislation in the United States relating to the sale or pricing of pharmaceuticals;
- FDA or other U.S. or foreign regulatory actions affecting us or our industry;
- product liability claims or other litigation or public concern about the safety of our product candidates;
- market conditions in the biopharmaceutical and biotechnology sectors; and
- general economic conditions in the United States and abroad.

In addition, the stock markets in general, and the markets for biopharmaceutical and biotechnology stocks in particular, have experienced extreme volatility that may have been unrelated to the operating performance of the issuer. These broad market fluctuations may adversely affect the trading price or liquidity of our common stock. In the past, when the market price of a stock has been volatile, holders of that stock have sometimes instituted securities class action litigation against the issuer. If any of our stockholders were to bring such a lawsuit against us, we could incur substantial costs defending the lawsuit and the attention of our management would be diverted from the operation of our business.

An active, liquid and orderly market for our common stock may not develop, and you may not be able to resell your common stock at or above the public offering price.

Prior to this offering, there has been no public market for shares of our common stock, and an active public market for our shares may not develop or be sustained after this offering. We and the representatives of the underwriters will determine the initial public offering price of our common stock through negotiation. This price will not necessarily reflect the price at which investors in the market will be willing to buy and sell our shares following this offering. In addition, an active trading market may not develop following the consummation of this offering or, if it is developed, may not be sustained. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. An inactive market may also impair our ability to raise capital by selling shares and may impair our ability to acquire other businesses, applications, or technologies using our shares as consideration.

If securities or industry analysts do not publish research or reports about our business, or if they issue an adverse or misleading opinion regarding our stock, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. We do not currently have and may never obtain research coverage by securities and industry analysts. If no or few securities or industry analysts commence coverage of us, the trading price for our stock would be negatively impacted. In the event we obtain securities or industry analyst coverage, if any of the analysts who cover us issue an adverse or misleading opinion regarding us, our business model, our intellectual property or our stock performance, or if our clinical trials and operating results fail to meet the expectations of analysts, our stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

We will incur significant costs as a result of operating as a public company, and our management will devote substantial time to new compliance initiatives. We may fail to comply with the rules that apply to public companies, including Section 404 of the Sarbanes-Oxley Act of 2002, which could result in sanctions or other penalties that would harm our business.

We will incur significant legal, accounting and other expenses as a public company, including costs resulting from public company reporting obligations under the Exchange Act and regulations regarding corporate governance practices. The listing requirements of The Nasdaq Global Market and the rules of the Securities and Exchange Commission, or SEC, require that we satisfy certain corporate governance requirements relating to director independence, filing annual and interim reports, stockholder meetings, approvals and voting, soliciting proxies, conflicts of interest and a code of conduct. Our management and other personnel will need to devote a substantial amount of time to ensure that we comply with all of these requirements. Moreover, the reporting requirements, rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. Any changes we make to comply with these obligations may not be sufficient to allow us to satisfy our obligations as a public company on a timely basis, or at all. These reporting requirements, rules and regulations, coupled with the increase in potential litigation exposure associated with being a public company, could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors or board committees or to serve as executive officers, or to obtain certain types of insurance, including directors' and officers' insurance, on acceptable terms.

After this offering, we will be subject to Section 404 of the Sarbanes-Oxley Act of 2002, or Section 404, and the related rules of the SEC, which generally require our management and independent registered public accounting firm to report on the effectiveness of our internal control over financial reporting. Beginning with the second annual report that we will be required to file with the SEC, Section 404 requires an annual management assessment of the effectiveness of our internal control over financial reporting. However, for so long as we remain an emerging growth company as defined in the JOBS Act, we intend to take advantage of certain exemptions from various reporting requirements that are applicable to public companies that are not emerging growth companies, including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404. Once we are no longer an emerging growth company or, if prior to such date, we opt to no longer take advantage of the applicable exemption, we will be required to include an opinion from our independent registered public accounting firm on the effectiveness of our internal controls over financial reporting. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of this offering, (b) in which we have total annual gross revenue of at least \$1.07 billion, or (c) in which we are deemed to be a large

accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds \$700.0 million as of the prior June 30th, and (2) the date on which we have issued more than \$1.0 billion in non-convertible debt during the prior three-year period.

To date, we have never conducted a review of our internal control for the purpose of providing the reports required by these rules. During the course of our review and testing, we may identify deficiencies and be unable to remediate them before we must provide the required reports. Furthermore, if we have a material weakness in our internal controls over financial reporting, we may not detect errors on a timely basis and our financial statements may be materially misstated. We or our independent registered public accounting firm may not be able to conclude on an ongoing basis that we have effective internal control over financial reporting, which could harm our operating results, cause investors to lose confidence in our reported financial information and cause the trading price of our stock to fall. In addition, as a public company we will be required to file accurate and timely quarterly and annual reports with the SEC under the Exchange Act. In order to report our results of operations and financial statements on an accurate and timely basis, we will depend on CROs to provide timely and accurate notice of their costs to us. Any failure to report our financial results on an accurate and timely basis could result in sanctions, lawsuits, delisting of our shares from The Nasdaq Global Market or other adverse consequences that would materially harm to our business.

Purchasers in this offering will experience immediate and substantial dilution in the book value of their investment.

The initial public offering price of our common stock is substantially higher than the pro forma net tangible book value per share of our common stock before giving effect to this offering. Accordingly, if you purchase our common stock in this offering, you will incur immediate and substantial dilution of approximately \$ per share, based on an assumed initial public offering price of \$ per share, the midpoint of the estimated price range set forth on the cover of this prospectus, and our pro forma net tangible book value as of June 30, 2018. In addition, following this offering, purchasers in this offering will have contributed approximately % of the total gross consideration paid by stockholders to us to purchase shares of our common stock, through June 30, 2018, but will own only approximately % of the shares of common stock outstanding immediately after this offering. Furthermore, if the underwriters exercise their option to purchase additional shares, or outstanding options and warrants are exercised, you could experience further dilution. For a further description of the dilution that you will experience immediately after this offering, see the section titled "Dilution."

If we sell shares of our common stock in future financings, stockholders may experience immediate dilution and, as a result, our stock price may decline.

We may from time to time issue additional shares of common stock at a discount from the current trading price of our common stock. As a result, our stockholders would experience immediate dilution upon the purchase of any shares of our common stock sold at such discount. In addition, as opportunities present themselves, we may enter into financing or similar arrangements in the future, including the issuance of debt securities, preferred stock or common stock. If we issue common stock or securities convertible into common stock, our common stockholders would experience additional dilution and, as a result, our stock price may decline.

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

Prior to this offering as of August 20, 2018, our executive officers, directors, holders of 5.0% or more of our capital stock and their respective affiliates held approximately 76.5% of our outstanding voting stock and, upon the closing of this offering, that same group will hold approximately % of our

outstanding voting stock (assuming no exercise of the underwriters' option to purchase additional shares of common stock and no exercise of outstanding options). Therefore, even after this offering these stockholders will have the ability to influence us through this ownership position. These stockholders may be able to determine all matters requiring stockholder approval. For example, these stockholders may be able to control elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may feel are in your best interest as one of our stockholders.

Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market after the lock-up and other legal restrictions on resale discussed in this prospectus lapse, the trading price of our common stock could decline. Based upon the number of shares outstanding as of August 20, 2018, upon the closing of this offering, we will have outstanding a total of _____ shares of common stock, assuming no exercise of the underwriters' option to purchase additional shares of common stock and no exercise of outstanding options. Of these shares, approximately _____ shares of our common stock sold in this offering, plus any shares sold upon exercise of the underwriters' option to purchase additional shares, will be freely tradable, without restriction, in the public market immediately following this offering.

The lock-up agreements pertaining to this offering will expire 180 days from the date of this prospectus. After the lock-up agreements expire, as of August 20, 2018, up to approximately 152.9 million additional shares of common stock will be eligible for sale in the public market, approximately 72.8 million of which shares are held by directors, executive officers and other affiliates and will be subject to Rule 144 under the Securities Act of 1933, as amended, or the Securities Act. Goldman Sachs & Co. LLC, Cowen and Company, LLC and Barclays Capital Inc. may, however, in their sole discretion, permit our officers, directors and other stockholders who are subject to these lock-up agreements to sell shares prior to the expiration of the lock-up agreements.

In addition, as of August 20, 2018, approximately 17.1 million shares of common stock that are either subject to outstanding options or reserved for future issuance under our equity incentive plans will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules, the lock-up agreements and Rule 144 and Rule 701 under the Securities Act. If these additional shares of common stock are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

After this offering, the holders of approximately 133.9 million shares of our common stock, or approximately 87.6% of our total outstanding common stock as of August 20, 2018, will be entitled to rights with respect to the registration of their shares under the Securities Act, subject to vesting schedules and to the lock-up agreements described above. Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares purchased by affiliates. Any sales of securities by these stockholders could have a material adverse effect on the trading price of our common stock.

We have broad discretion to determine how to use the funds raised in this offering, and may use them in ways that may not enhance our operating results or the price of our common stock.

Our management will have broad discretion over the use of proceeds from this offering, and we could spend the proceeds from this offering in ways our stockholders may not agree with or that do not

yield a favorable return, if at all. We currently expect to use the net proceeds of this offering to fund our planned Phase 1/2 clinical trial of GRANITE-001, continued buildout of our manufacturing facility, internal research and development activities including preclinical and IND-enabling activities for SLATE-001, and for working capital and general corporate purposes. However, our use of these proceeds may differ substantially from our current plans. If we do not invest or apply the proceeds of this offering in ways that improve our operating results, we may fail to achieve expected financial results, which could cause our stock price to decline.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

We have incurred substantial losses during our history and do not expect to become profitable in the near future, and we may never achieve profitability. To the extent that we continue to generate taxable losses, unused losses will carry forward to offset a portion of future taxable income, if any, until such unused losses expire, if ever. Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an "ownership change," generally defined as a greater than 50 percentage point change (by value) in its equity ownership by certain stockholders over a three-year period, the corporation's ability to use its pre-change net operating loss carryforwards, or NOLs, and other pre-change tax attributes (such as research and development tax credits) to offset its post-change income or taxes may be limited. While we do not believe we have experienced ownership changes in the past, it is possible we have done so, and we may experience ownership changes in the future as a result of this offering and/or subsequent shifts in our stock ownership (some of which shifts are outside our control). As a result, even if we attain profitability, we may be unable to use a material portion of our NOLs and other tax attributes.

Recent U.S. tax legislation and future changes to applicable U.S. tax laws and regulations may have a material adverse effect on our business, financial condition and results of operations.

Changes in laws and policy relating to taxes may have an adverse effect on our business, financial condition and results of operations. For example, the U.S. government recently enacted significant tax reform legislation, and certain provisions of the new law may adversely affect us. Changes include, but are not limited to, a federal corporate income tax rate decrease to 21% for tax years beginning after December 31, 2017, a reduction to the maximum deduction allowed for net operating losses generated in tax years after December 31, 2017, eliminating carrybacks of net operating losses, and providing for indefinite carryforwards for losses generated in tax years after December 31, 2017. The legislation is unclear in many respects and could be subject to potential amendments and technical corrections, and will be subject to interpretations and implementing regulations by the Treasury and Internal Revenue Service, any of which could mitigate or increase certain adverse effects of the legislation. In addition, it is unclear how these U.S. federal income tax changes will affect state and local taxation. Generally, future changes in applicable U.S. tax laws and regulations, or their interpretation and application could have an adverse effect on our business, financial condition and results of operations.

Provisions in our charter documents and under Delaware law could discourage a takeover that stockholders may consider favorable and may lead to entrenchment of management.

Our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect immediately prior to the consummation of this offering will contain provisions that could delay or prevent changes in control or changes in our management without the consent of our board of directors. These provisions will include the following:

- a classified board of directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of our board of directors;

- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- the exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- the ability of our board of directors to authorize the issuance of shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquiror;
- the ability of our board of directors to alter our amended and restated bylaws without obtaining stockholder approval;
- the required approval of at least 66 2/3% of the shares entitled to vote at an election of directors to adopt, amend or repeal our amended and restated bylaws or repeal the provisions of our amended and restated certificate of incorporation regarding the election and removal of directors;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- the requirement that a special meeting of stockholders may be called only by our chief executive officer or president or by the board of directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors; and
- advance notice procedures that stockholders must comply with in order to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of us.

We are also subject to the anti-takeover provisions contained in Section 203 of the Delaware General Corporation Law. Under Section 203, a corporation may not, in general, engage in a business combination with any holder of 15% or more of its capital stock unless the holder has held the stock for three years or, among other exceptions, the board of directors has approved the transaction. For a description of our capital stock, see the section titled "Description of Capital Stock."

Claims for indemnification by our directors and officers may reduce our available funds to satisfy successful third-party claims against us and may reduce the amount of money available to us.

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that we will indemnify our directors and officers, in each case to the fullest extent permitted by Delaware law.

In addition, as permitted by Section 145 of the Delaware General Corporation Law, our amended and restated bylaws to be effective immediately prior to the completion of this offering and our indemnification agreements that we have entered into with our directors and officers will provide that:

- We will indemnify our directors and officers for serving us in those capacities or for serving other business enterprises at our request, to the fullest extent permitted by Delaware law. Delaware law provides that a corporation may indemnify such person if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the registrant and, with respect to any criminal proceeding, had no reasonable cause to believe such person's conduct was unlawful.

- We may, in our discretion, indemnify employees and agents in those circumstances where indemnification is permitted by applicable law.
- We are required to advance expenses, as incurred, to our directors and officers in connection with defending a proceeding, except that such directors or officers shall undertake to repay such advances if it is ultimately determined that such person is not entitled to indemnification.
- We will not be obligated pursuant to our amended and restated bylaws to indemnify a person with respect to proceedings initiated by that person against us or our other indemnitees, except with respect to proceedings authorized by our board of directors or brought to enforce a right to indemnification.
- The rights conferred in our amended and restated bylaws are not exclusive, and we are authorized to enter into indemnification agreements with our directors, officers, employees and agents and to obtain insurance to indemnify such persons.
- We may not retroactively amend our amended and restated bylaw provisions to reduce our indemnification obligations to directors, officers, employees and agents.

Our amended and restated certificate of incorporation will provide for an exclusive forum in the Court of Chancery of the State of Delaware and in the U.S. federal district courts for certain disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation will provide that the Court of Chancery of the State of Delaware is the exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a breach of fiduciary duty, any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws, any action to interpret, apply, enforce, or determine the validity of our amended and restated certificate of incorporation or amended and restated bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine. Similarly, our amended and restated certificate of incorporation will provide that the U.S. federal district courts are the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. The choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. Alternatively, if a court were to find the choice of forum provision that will be contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition.

We do not currently intend to pay dividends on our common stock, and, consequently, your ability to achieve a return on your investment will depend on appreciation in the price of our common stock.

We do not currently intend to pay any cash dividends on our common stock for the foreseeable future. We currently intend to invest our future earnings, if any, to fund our growth. Therefore, you are not likely to receive any dividends on your common stock for the foreseeable future. Since we do not intend to pay dividends, your ability to receive a return on your investment will depend on any future appreciation in the market value of our common stock. There is no guarantee that our common stock will appreciate or even maintain the price at which our holders have purchased it.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements concerning our business, operations and financial performance and condition, as well as our plans, objectives and expectations for our business operations and financial performance and condition. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “aim,” “anticipate,” “assume,” “believe,” “contemplate,” “continue,” “could,” “due,” “estimate,” “expect,” “goal,” “intend,” “may,” “objective,” “plan,” “predict,” “potential,” “positioned,” “seek,” “should,” “target,” “will,” “would,” and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology. These forward-looking statements include, but are not limited to, statements about:

- our expectations regarding the potential market size and size of the potential patient populations for GRANITE-001, SLATE-001 and any future product candidates, if approved for commercial use;
- our clinical and regulatory development plans;
- our expectations with regard to our Gritstone EDGE platform, including our ability to utilize the platform to predict the TSNA that will be presented on a patient’s tumor cells and identify shared antigens for other therapeutic classes;
- our expectations with regard to the data to be derived in our planned Phase 1/2 clinical trial, GO-004;
- the timing of commencement of future nonclinical studies and clinical trials and research and development programs;
- our ability to acquire, discover, develop and advance product candidates into, and successfully complete, clinical trials;
- our intentions and our ability to establish collaborations and/or partnerships;
- the timing or likelihood of regulatory filings and approvals for our product candidates;
- our commercialization, marketing and manufacturing capabilities and expectations;
- our intentions with respect to the commercialization of our product candidates;
- the pricing and reimbursement of our product candidates, if approved;
- the implementation of our business model and strategic plans for our business, product candidates and technology platforms, including additional indications for which we may pursue;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates, including the projected terms of patent protection;
- estimates of our expenses, future revenue, capital requirements, our needs for additional financing and our ability to obtain additional capital;
- our use of proceeds from this offering;
- our future financial performance;
- developments and projections relating to our competitors and our industry, including competing therapies and procedures; and
- other risks and uncertainties, including those listed under the caption “Risk Factors.”

These forward-looking statements are based on management’s current expectations, estimates, forecasts and projections about our business and the industry in which we operate and management’s

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beliefs and assumptions and are not guarantees of future performance or development and involve known and unknown risks, uncertainties and other factors that are in some cases beyond our control. As a result, any or all of our forward-looking statements in this prospectus may turn out to be inaccurate. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under “Risk Factors” and elsewhere in this prospectus. Potential investors are urged to consider these factors carefully in evaluating the forward-looking statements. These forward-looking statements speak only as of the date of this prospectus. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future. You should, however, review the factors and risks we describe in the reports we will file from time to time with the SEC after the date of this prospectus. See “Where You Can Find More Information.”

MARKET AND INDUSTRY DATA

This prospectus contains estimates, projections and other information concerning our industry, our business, as well as data regarding market research, estimates and forecasts prepared by our management. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. Unless otherwise expressly stated, we obtained this industry, business, market and other data from reports, research surveys, studies and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources. In some cases, we do not expressly refer to the sources from which this data is derived. In that regard, when we refer to one or more sources of this type of data in any paragraph, you should assume that other data of this type appearing in the same paragraph is derived from the same sources, unless otherwise expressly stated or the context otherwise requires.

USE OF PROCEEDS

We estimate that the net proceeds from the sale of _____ shares of our common stock in this offering will be approximately \$ _____ million at an assumed initial public offering price of \$ _____ per share (the midpoint of the range set forth on the cover of this prospectus), after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters exercise their option to purchase additional shares in full, we estimate that the net proceeds will be approximately \$ _____ million at an assumed initial public offering price of \$ _____ per share (the midpoint of the range set forth on the cover of this prospectus), after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

Each \$1.00 increase (decrease) in the assumed initial public offering price of \$ _____ per share (the midpoint of the range set forth on the cover of this prospectus) would increase (decrease) the net proceeds to us from this offering, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, by approximately \$ _____ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. We may also increase or decrease the number of shares we are offering. Each increase (decrease) of 1,000,000 in the number of shares we are offering would increase (decrease) the net proceeds to us from this offering, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, by approximately \$ _____ million, assuming the assumed initial public offering price stays the same. We do not expect that a change in the offering price or the number of shares by these amounts would have a material effect on our intended uses of the net proceeds from this offering, although it may impact the amount of time prior to which we may need to seek additional capital.

We currently expect to use our net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, as follows:

- approximately \$ _____ million to \$ _____ million to fund our planned Phase 1/2 clinical trial of GRANITE-001;
- approximately \$ _____ million to \$ _____ million to fund the continued buildout of our manufacturing facility;
- approximately \$ _____ million to \$ _____ million to fund internal research and development activities, including preclinical and IND-enabling activities for SLATE-001; and
- the balance for working capital and general corporate purposes.

We may also use a portion of the remaining net proceeds and our existing cash, cash equivalents and marketable securities to in-license, acquire, or invest in complementary businesses, technologies, products or assets. However, we have no current commitments or obligations to do so.

Due to the uncertainties inherent in the clinical development and regulatory approval process, it is difficult to estimate with certainty the exact amounts of the net proceeds from this offering that may be used for the above purposes. As such, our management will retain broad discretion over the use of the net proceeds from this offering. The amounts and timing of our expenditures will depend upon numerous factors, including: (i) the time and cost necessary to advance GRANITE-001 through our planned Phase 1/2 clinical trial and future clinical trials; (ii) the timing of scaling our manufacturing capabilities and internalizing certain of our manufacturing processes; (iii) the time and cost associated with our research and development activities; and (iv) our ability to obtain regulatory approval for and subsequently commercialize GRANITE-001, SLATE-001 and any other future product candidates.

We believe that our existing cash, cash equivalents and marketable securities, together with the net proceeds from this offering, will be sufficient to fund our planned operations for at least _____ months

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following the date of this offering. After this offering, we will require substantial capital in order to advance GRANITE-001, SLATE-001 and any other future product candidates through pivotal clinical trials, regulatory approval and commercialization. For additional information regarding our potential capital requirements, see “Risk Factors—We will require substantial additional financing to achieve our goals, and a failure to obtain this necessary capital when needed on acceptable terms, or at all, could force us to delay, limit, reduce or terminate our product development programs, commercialization efforts or other operations.”

Pending the use of the proceeds from this offering, we intend to invest the net proceeds in interest-bearing, investment-grade securities, certificates of deposit or government securities.

DIVIDEND POLICY

We have never declared or paid cash dividends on our capital stock. We intend to retain all available funds and any future earnings, if any, to fund the development and expansion of our business and we do not anticipate paying any cash dividends in the foreseeable future. Any future determination related to dividend policy will be made at the discretion of our board of directors.

CAPITALIZATION

The following table sets forth our cash, cash equivalents and marketable securities and capitalization as of June 30, 2018:

- on an actual basis;
- on a pro forma basis to give effect to: (i) our issuance and sale during July and August 2018 of an aggregate of 6,358,201 shares of our Series C convertible preferred stock for cash consideration of \$12.0 million, which includes 5,300,000 shares that bluebird bio purchased for cash consideration of approximately \$10.0 million in connection with our strategic collaboration; (ii) the automatic conversion of all shares of our convertible preferred stock outstanding at June 30, 2018, together with the shares of Series C convertible preferred stock we issued during July and August 2018, into an aggregate of 133,923,424 shares of our common stock, which will be effective immediately prior to the consummation of this offering; and (iii) the filing and effectiveness of our amended and restated certificate of incorporation, which will occur immediately prior to the consummation of this offering; and
- on a pro forma as adjusted basis to give further effect to the sale of _____ shares of common stock in this offering at an assumed initial public offering price of \$ _____ per share (the midpoint of the range set forth on the cover of this prospectus), after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this information together with our financial statements and related notes appearing elsewhere in this prospectus and the information set forth under the headings “Selected Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

	As of June 30, 2018		
	Actual	Pro Forma (In thousands, except share and per share data) (unaudited)	Pro Forma As Adjusted(1)
Cash, cash equivalents and marketable securities	\$ 64,490	\$ 76,490	\$ _____
Stockholders' equity:			
Convertible preferred stock, \$0.0001 par value— 139,228,319 shares authorized, 127,565,223 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	\$ 165,865	\$ —	\$ _____
Common stock, \$0.0001 par value—175,250,000 shares authorized, 16,619,601 shares issued and outstanding, actual; 300,000,000 shares authorized, 150,595,025 shares issued and outstanding, pro forma; 300,000,000 shares authorized, _____ shares issued and outstanding, pro forma as adjusted	2	15	
Preferred stock, \$0.0001 par value—no shares authorized, issued and outstanding, actual; 10,000,000 shares authorized, pro forma and pro forma as adjusted; no shares issued and outstanding, pro forma and pro forma as adjusted	—	—	
Additional paid-in capital	3,311	181,163	
Accumulated other comprehensive loss	(31)	(31)	
Accumulated deficit	(90,475)	(90,475)	
Total stockholders' equity	78,672	90,672	
Total capitalization	\$ 78,672	\$ 90,672	\$ _____

(1) A \$1.00 increase (decrease) in the assumed initial public offering price of \$ _____ per share (the midpoint of the range set forth on the cover of this prospectus) would increase (decrease) the amount of each of cash,

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cash equivalents and marketable securities, additional paid-in capital, total stockholders' equity and total capitalization by approximately \$, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. Each increase (decrease) of 1,000,000 shares in the number of shares offered by us would increase (decrease) each of cash, cash equivalents and marketable securities, additional paid-in capital, total stockholders' equity and total capitalization by approximately \$, assuming the assumed initial public offering price of \$ per share (the midpoint of the range set forth on the cover of this prospectus) remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. The pro forma as adjusted information discussed above is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering determined at pricing.

The outstanding share information in the table above excludes the following:

- 11,507,414 shares of common stock issuable upon the exercise of outstanding stock options as of June 30, 2018 having a weighted-average exercise price of \$0.22 per share;
- 5,580,429 shares of common stock reserved for issuance pursuant to future awards under our 2015 Equity Incentive Plan, as amended, as of June 30, 2018, which will become available for issuance under our 2018 Incentive Award Plan after consummation of this offering;
- 2,322,556 shares of issued and outstanding restricted common stock that were subject to repurchase as of June 30, 2018;
- shares of common stock reserved for issuance pursuant to future awards under our 2018 Incentive Award Plan, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan, which will become effective on the day prior to the first public trading date of our common stock; and
- shares of common stock reserved for issuance pursuant to future awards under our 2018 Employee Stock Purchase Plan, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan, which will become effective on the day prior to the first public trading date of our common stock.

DILUTION

If you invest in our common stock in this offering, your interest will be immediately diluted to the extent of the difference between the initial public offering price per share of our common stock in this offering and the net tangible book value per share of our common stock after this offering.

As of June 30, 2018, we had a historical net tangible book value of \$78.7 million, or \$4.15 per share of common stock. Our net tangible book value represents total tangible assets less total liabilities, all divided by 18,942,157 shares of common stock outstanding on June 30, 2018, which includes 2,322,556 shares of restricted common stock that were subject to repurchase as of June 30, 2018. Our pro forma net tangible book value at June 30, 2018, before giving effect to this offering, was \$90.7 million, or \$0.59 per share of our common stock. Pro forma net tangible book value, before the issuance and sale of shares in this offering, gives effect to:

- our issuance and sale during July and August 2018 of an aggregate of 6,358,201 shares of our Series C convertible preferred stock for cash consideration of \$12.0 million, which includes 5,300,000 shares that bluebird bio purchased for cash consideration of approximately \$10.0 million in connection with our strategic collaboration;
- the automatic conversion of all shares of our convertible preferred stock outstanding at June 30, 2018, together with the shares of Series C convertible preferred stock we issued during July and August 2018, into an aggregate of 133,923,424 shares of our common stock, which will be effective immediately prior to the consummation of this offering; and
- the filing and effectiveness of our amended and restated certificate of incorporation, which will occur immediately prior to the consummation of this offering.

After giving effect to the sale of _____ shares of common stock in this offering at an assumed initial public offering price of \$ _____ per share (the midpoint of the range set forth on the cover of this prospectus) and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of June 30, 2018 would have been approximately \$ _____ million, or \$ _____ per share. This represents an immediate increase in pro forma as adjusted net tangible book value of \$ _____ per share to existing stockholders and an immediate dilution of \$ _____ per share to new investors. The following table illustrates this per share dilution:

Assumed initial public offering price per share		\$
Historical net tangible book value per share as of June 30, 2018	\$ 4.15	
Pro forma decrease in historical net tangible book value per share attributable to the pro forma transactions described in the preceding paragraphs	(3.56)	
Pro forma net tangible book value per share as of June 30, 2018	0.59	
Increase in pro forma net tangible book value per share attributable to new investors purchasing shares in this offering	_____	
Pro forma as adjusted net tangible book value per share after this offering	_____	
Dilution per share to new investors purchasing shares in this offering	_____	\$

Each \$1.00 increase (decrease) in the assumed initial public offering price of \$ _____ per share (the midpoint of the range set forth on the cover of this prospectus) would increase (decrease) our pro forma as adjusted net tangible book value as of June 30, 2018 after this offering by approximately \$ _____ million, or approximately \$ _____ per share, and would decrease (increase) dilution to investors in this offering by approximately \$ _____ per share, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, after deducting the underwriting

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discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. Assuming the assumed initial public price of \$ per share (the midpoint of the range set forth on the cover of this prospectus) remains the same, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, each increase of 1,000,000 in the number of shares we are offering would increase our pro forma as adjusted net tangible book value as of June 30, 2018 after this offering by approximately \$ million, or approximately \$ per share, and would decrease dilution to investors in this offering by approximately \$ per share, and a decrease of 1,000,000 in the number of shares we are offering would decrease our pro forma as adjusted net tangible book value as of June 30, 2018 after this offering by approximately \$ million, or approximately \$ per share, and would increase dilution to investors in this offering by approximately \$ per share. The pro forma as adjusted information is illustrative only, and we will adjust this information based on the actual initial public offering price and other terms of this offering determined at pricing.

If the underwriters fully exercise their option to purchase additional shares, pro forma as adjusted net tangible book value after this offering would increase to approximately \$ per share, and there would be an immediate dilution of approximately \$ per share to new investors.

To the extent that outstanding options with an exercise price per share that is less than the pro forma as adjusted net tangible book value per share are exercised, new investors will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

The following table shows, as of June 30, 2018, on a pro forma as adjusted basis, the number of shares of common stock purchased from us, the total consideration paid to us and the average price paid per share by existing stockholders and by new investors purchasing common stock in this offering at an assumed initial public offering price of \$ per share (the midpoint of the range set forth on the cover of this prospectus), before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us:

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount (in thousands)	Percent	
Existing stockholders before this offering	152,865,581	%	\$ 178,678	%	\$ 1.17
Investors participating in this offering					\$
Total		100%	\$	100%	

The number of shares of common stock to be outstanding after this offering is based on 152,865,581 shares of common stock outstanding as of June 30, 2018, and includes an aggregate of 127,565,223 million shares of common stock issuable upon conversion of our outstanding Series A, Series B and Series C convertible preferred stock as of June 30, 2018, 6,358,201 shares of common stock issuable upon conversion of our Series C convertible preferred stock that we issued in July and August 2018, and 2,322,556 shares of restricted common stock that were subject to repurchase as of June 30, 2018, and excludes the following:

- 11,507,414 shares of common stock issuable upon the exercise of outstanding stock options as of June 30, 2018 having a weighted-average exercise price of \$0.22 per share;
- 5,580,429 shares of common stock reserved for issuance pursuant to future awards under our 2015 Equity Incentive Plan, as amended, as of June 30, 2018, which will become available for issuance under our 2018 Incentive Award Plan after consummation of this offering;

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- shares of common stock reserved for issuance pursuant to future awards under our 2018 Incentive Award Plan, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan, which will become effective on the day prior to the first public trading date of our common stock; and
- shares of common stock reserved for issuance pursuant to future awards under our 2018 Employee Stock Purchase Plan, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan, which will become effective on the day prior to the first public trading date of our common stock.

To the extent any outstanding options are exercised, or we issue additional equity or convertible debt securities in the future, there will be further dilution to new investors.

SELECTED FINANCIAL DATA

The following tables present our selected financial data for the periods and as of the dates indicated. We have derived the following selected statements of operations and comprehensive loss data for the years ended December 31, 2016 and 2017, and the balance sheet data as of December 31, 2016 and 2017, from our audited financial statements and related notes included elsewhere in this prospectus. The selected statement of operations data for the six months ended June 30, 2017 and 2018 and the selected balance sheet data as of June 30, 2018 are derived from our unaudited interim condensed financial statements included elsewhere in this prospectus. The unaudited interim condensed financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America and on the same basis as the audited financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary to present fairly our financial position as of June 30, 2018 and the results of operations for the six months ended June 30, 2017 and 2018. Our historical results are not necessarily indicative of the results that may be expected in the future and results for the six months ended June 30, 2018 are not necessarily indicative of results to be expected for the full year. You should read the financial data below in conjunction with the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our audited financial statements and unaudited interim condensed financial statements and related notes included elsewhere in this prospectus.

	Year Ended December 31,		Six Months Ended June 30,	
	2016	2017	2017	2018
	(unaudited)			
	(in thousands, except share and per share data)			
Statements of Operations and Comprehensive Loss Data:				
Operating Expenses:				
Research and development	\$ 13,916	\$ 35,691	\$ 11,855	\$ 24,090
General and administrative	5,064	6,072	2,840	4,852
Total operating expenses	18,980	41,763	14,695	28,942
Loss from operations	(18,980)	(41,763)	(14,695)	(28,942)
Interest income, net	230	386	138	94
Net loss	(18,750)	(41,377)	(14,557)	(28,848)
Unrealized loss on marketable securities	(2)	(71)	(2)	(31)
Other comprehensive loss	\$ (18,752)	\$ (41,448)	\$ (14,559)	\$ (28,879)
Net loss per share, basic and diluted(1)	\$ (1.62)	\$ (3.00)	\$ (1.11)	\$ (1.83)
Weighted-average number of shares outstanding, basic and diluted(1)	11,540,581	13,793,417	13,156,419	15,772,769
Pro forma net loss per share, basic and diluted(1)		\$ (0.44)		\$ (0.21)
Pro forma weighted-average number of shares outstanding, basic and diluted(1)		94,529,860		138,628,706

(1) See Notes 2 and 12 to our audited financial statements, and Notes 2 and 10 to our unaudited interim condensed financial statements, included elsewhere in this prospectus for further details on the calculations of our basic and diluted net loss per share, basic and diluted pro forma net loss per share and the weighted-average number of shares used in the computation of the per share amounts.

	<u>As of December 31,</u>		<u>As of June 30,</u>
	<u>2016</u>	<u>2017</u>	<u>2018</u>
			<u>(unaudited)</u>
	(in thousands)		
Balance Sheets Data:			
Cash, cash equivalents and marketable securities	\$ 37,507	\$ 85,953	\$ 64,490
Working capital(1)	35,897	80,827	61,697
Total assets	46,421	117,300	95,951
Total liabilities	4,732	20,018	17,280
Convertible preferred stock	61,139	156,937	165,865
Accumulated deficit	(20,250)	(61,627)	(90,475)
Total stockholders' equity	41,689	97,282	78,672

(1) We define working capital as current assets less current liabilities. See our audited financial statements and unaudited interim condensed financial statements and related notes included elsewhere in this prospectus for details regarding our current assets and current liabilities.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with the section titled "Selected Financial Data" and our audited financial statements and unaudited interim condensed financial statements and related notes included elsewhere in this prospectus. This discussion and other parts of this prospectus contain forward-looking statements that involve risks and uncertainties, such as our plans, objectives, expectations, intentions and beliefs. Our actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in the section titled "Risk Factors" included elsewhere in this prospectus.

Overview

We are an immuno-oncology company developing tumor-specific cancer immunotherapies to fight multiple cancer types. Our approach harnesses the natural power of a patient's own immune system to recognize short tumor-specific peptide sequences presented on cancer cells, referred to as tumor-specific neoantigens, or TSNA, in order to destroy tumor cells. Our tumor-specific immunotherapy treatment is built on two key pillars—first, our proprietary Gritstone EDGE platform, which gives us a superior ability to predict, from a routine tumor biopsy, the TSNA that are presented on a patient's tumor cells; and second, our ability to develop and manufacture potent immunotherapies utilizing patients' TSNA to drive the patient's immune system to attack and destroy tumors.

We intend to initiate a Phase 1/2 clinical trial of our first personalized immunotherapy product candidate, GRANITE-001, in the second half of 2018, evaluating it in the treatment of common solid tumors, including metastatic non-small cell lung cancer and gastroesophageal, bladder and colorectal cancers, in each case in combination with checkpoint inhibitors provided by our partner, Bristol-Myers Squibb Company, or BMS. Our second tumor-specific product candidate series, SLATE, utilizes the same antigen delivery system as GRANITE-001 but contains a fixed cassette with TSNA that are shared across a subset of cancer patients rather than a cassette unique to an individual patient, providing us with an off-the-shelf alternative to our personalized manufactured product candidate, GRANITE-001. We intend to initiate a Phase 2 clinical trial of SLATE-001, our first "off-the-shelf" product candidate in the second half of 2019.

Beyond TSNA-directed therapeutics, we are leveraging our expertise in cancer genomics and our tumor antigen discovery platform to identify novel peptide sequences (not mutated) that may be shared across common tumor types (tumor-specific shared antigens), which we believe likely have value as targets to direct T cells onto tumors specifically. These shared antigen targets enable us to opportunistically partner or develop additional therapeutic approaches to redirect T cells onto tumors using these highly specific targets. These approaches include (1) "off-the-shelf" shared, non-mutated tumor antigens in our heterologous prime-boost platform, (2) modifying the receptors of the patient's own T cells to help them recognize tumor targets (adoptive T cell therapy) and (3) using small adapter proteins that have two recognition arms—one for tumors and one for T cells (bispecific antibodies). In August 2018, we announced our first collaboration supporting this strategy with bluebird bio, Inc., or bluebird bio, whereby we will identify up to ten tumor-specific targets and associated T cell receptors for therapeutic application within bluebird bio's cell therapy platform.

We have funded our operations to date primarily from private placements of our convertible preferred stock, including a \$10.0 million investment in our Series C convertible preferred stock by bluebird bio, as well as a \$20.0 million upfront payment from bluebird bio in August 2018. We do not expect to generate

revenue from any product candidates that we develop until we obtain regulatory approval for one or more of such product candidates and commercialize our products or enter into collaboration agreements with third parties. Substantially all of our net losses have resulted from costs incurred in connection with our research and development programs and from general and administrative costs associated with our operations. GRANITE-001 and SLATE-001 will require substantial additional development time and resources before we would be able to apply for or receive regulatory approvals and begin generating revenue from product sales. In addition, upon the completion of this offering we expect to incur additional costs associated with operating as a public company. We also do not yet have a sales organization or commercial infrastructure and, accordingly, we will incur significant expenses to develop a sales organization or commercial infrastructure in advance of generating any commercial product sales. As a result, we will need substantial additional capital to support our operating activities.

We currently anticipate that we will seek to fund our operations through equity or debt financings or other sources, such as potential collaboration agreements with third parties. Adequate funding may not be available to us on acceptable terms, or at all. If sufficient funds on acceptable terms are not available when needed, we will be required to significantly reduce our operating expenses and delay, reduce the scope of, or eliminate one or more of our development programs. As a result, there is substantial doubt about our ability to continue as a going concern. See “—Liquidity and Capital Resources” below and Note 2 to the audited financial statements and unaudited interim condensed financial statements and related notes included elsewhere in this prospectus for additional information describing the circumstances that led to this determination.

Manufacturing is a vital component of personalized immunotherapy, and we have invested significantly in our manufacturing facility, which opened in November 2017. We currently use a hybrid approach to manufacturing our personalized immunotherapy wherein certain elements of our product candidates are manufactured on an outsourced basis at qualified third-party contract manufacturing organizations, or CMOs, and other elements of our product candidates are manufactured internally. Our goal is to internalize the majority of the manufacturing steps to drive down both cost and production time, as well as establish full control over intellectual property and product quality, which will require significant investments in our manufacturing facility and processes.

Since we commenced operations in August 2015, we have invested a significant portion of our efforts and financial resources in research and development activities and establishing our manufacturing facility, and we have incurred net losses each year since inception. Our net losses were \$18.8 million and \$41.4 million for the years ended December 31, 2016 and 2017, respectively, and \$28.8 million for the six months ended June 30, 2018. We do not have any products approved for sale, and we have never generated any revenue from contracts with customers. As of June 30, 2018, we had an accumulated deficit of \$90.5 million, and we do not expect positive cash flows from operations in the foreseeable future. We expect to continue to incur net operating losses for at least the next several years as we advance our personalized cancer immunotherapy through clinical development, seek regulatory approval, prepare for and, if approved, proceed to commercialization, continue our research and development efforts and invest in our manufacturing facility.

Components of Our Operating Results

Operating Expenses

Research and Development Expenses

Since our inception, we have focused significant resources on our research and development activities, including conducting preclinical studies, manufacturing development efforts and activities related to the submission of our Investigational New Drug application, or IND, for GRANITE-001.

Research and development activities account for a significant portion of our operating expenses. Research and development costs are expensed as incurred. These costs include:

- External research and development expenses, including:
 - Expenses incurred under arrangement with third parties, including clinical research organizations, or CROs, preclinical testing organizations, CMOs, academic and non-profit institutions and consultants;
 - Fees related to our license agreements;
- Internal research and development expenses, including:
 - Personnel related expenses, including salaries, payroll taxes, benefits, non-cash stock-based compensation and travel, for employees contributing to research and development activities, including the costs associated with the development of our EDGE platform; and
- Other expenses, which include direct and allocated expenses for laboratories, facilities and other costs.

In October 2017, we entered into a license agreement with Arbutus Biopharma Corporation, or Arbutus. Certain terms of the agreement were modified by amendment in July 2018. Under the agreement, Arbutus grants us a worldwide, exclusive license to certain technology of Arbutus, including Arbutus' portfolio of proprietary and clinically validated LNP products and associated intellectual property, as well as technology transfer of Arbutus' manufacturing know-how. Under this agreement, we made an upfront payment of \$5.0 million, which was included in research and development expenses during the year ended December 31, 2017. We also reimbursed Arbutus for materials and personnel costs totaling \$0.2 million, which were included in research and development expenses during the same period. During the six months ended June 30, 2018, we reimbursed Arbutus for materials and personnel costs totaling \$0.3 million. See "Business—Manufacturing and Process Development—License Agreement with Arbutus Biopharma Corporation" for additional information.

We expect our research and development expenses to increase substantially in the future as we advance our personalized cancer immunotherapy candidate into and through clinical studies and pursue regulatory approval. The process of conducting the necessary clinical studies to obtain regulatory approval is costly and time-consuming. Clinical studies generally become larger and more costly to conduct as they advance into later stages and, in the future, we will be required to make estimates for expense accruals related to clinical study expenses. The successful development of our product candidates is highly uncertain. The actual probability of success for our product candidates may be affected by a variety of risks and uncertainties associated with drug development, including those set forth in the section of this prospectus titled "Risk Factors." At this time, we cannot reasonably estimate the nature, timing or costs required to complete the remaining development of our current or any future product candidates. As a result of these uncertainties, we are unable to determine the duration and completion costs of our research and development projects or when and to what extent we will generate revenue from the commercialization and sale of our product candidates.

Due to the early-stage nature of our personalized cancer immunotherapy programs, we do not track costs on a project-by-project basis. As our programs enter clinical studies, we intend to track the costs of each program.

General and Administrative Expenses

Our general and administrative expenses consist primarily of salaries and related costs, including payroll taxes, benefits, non-cash stock-based compensation and travel. Other general and administrative expenses include legal costs of pursuing patent protection of our intellectual property, and professional service fees for auditing, tax and general legal services. We expect our general and

administrative expenses to continue to increase in the future as we expand our operating activities and prepare for potential commercialization of our current and future product candidates, increase our headcount and support our operations as a public company, including increased expenses related to legal, accounting, regulatory and tax-related services associated with maintaining compliance with requirements of The Nasdaq Global Market and the SEC, directors and officers liability insurance premiums and investor relations activities. Allocated expenses consist of rent expenses related to our office and research and development facilities, depreciation and other allocated costs not otherwise included in research and development expenses.

Interest Income, Net

Interest income, net, consists primarily of interest income and investment income earned on our cash, cash equivalents and marketable securities, and interest expense on our lease financing obligation.

Results of Operations

Comparison of the Six Months Ended June 30, 2017 and 2018

The following table sets forth the significant components of our results of operations (in thousands):

	Six Months Ended June 30,		Change
	2017	2018	
Operating Expenses:			
Research and development	\$ 11,855	\$ 24,090	\$ 12,235
General and administrative	2,840	4,852	2,012
Total operating expenses	14,695	28,942	14,247
Loss from operations	(14,695)	(28,942)	(14,247)
Interest income, net	138	94	(44)
Net loss	<u>\$(14,557)</u>	<u>\$(28,848)</u>	<u>\$(14,291)</u>

Research and Development Expenses

Research and development expenses were \$11.9 million for the six months ended June 30, 2017 compared to \$24.1 million for the six months ended June 30, 2018. The increase of \$12.2 million was primarily due to increases in personnel related expenses, expenses related to outside services and consultants, in-house laboratory supplies and consumables, and facilities expenses. Personnel related costs increased by \$3.4 million, as a direct result of our increased research and development headcount. Outside services and consultants increased by \$4.6 million for preclinical testing and contract manufacturing expansion. In-house expenses for laboratory supplies and consumables increased by \$2.1 million, and reflect our increased research and development personnel. Facility related expenses increased by \$2.2 million to accommodate our manufacturing expansion and increased research and development personnel.

General and Administrative Expenses

General and administrative expenses were \$2.8 million for the six months ended June 30, 2017 compared to \$4.8 million for the six months ended June 30, 2018. The increase of \$2.0 million was primarily attributable to a \$1.3 million increase in personnel related costs as we expanded our headcount, and a \$0.5 million increase in outside services for finance, recruiting and other professional services to support our ongoing operations. Facility related expenses increased by \$0.1 million to accommodate our increased general and administrative personnel.

Comparison of the Years Ended December 31, 2016 and 2017

The following table sets forth the significant components of our results of operations (in thousands):

	Year Ended December 31,		Change
	2016	2017	
Operating Expenses:			
Research and development	\$ 13,916	\$ 35,691	\$ 21,775
General and administrative	5,064	6,072	1,008
Total operating expenses	18,980	41,763	22,783
Loss from operations	(18,980)	(41,763)	(22,783)
Interest income, net	230	386	156
Net loss	<u>\$(18,750)</u>	<u>\$(41,377)</u>	<u>\$(22,627)</u>

Research and Development Expenses

Research and development expenses were \$13.9 million for the year ended December 31, 2016 compared to \$35.7 million for the year ended December 31, 2017. The increase of \$21.8 million was primarily due to increases in personnel related expenses, license payments, expenses related to outside services and consultants, in-house laboratory supplies and consumables, and facilities expenses. Personnel related costs increased by \$6.7 million, as a direct result of our increased research and development headcount. License payments increased by \$5.1 million primarily as a result of our \$5.0 million up-front payment to Arbutus. Outside services and consultants increased by \$5.1 million for preclinical testing, sample acquisition and manufacturing expansion. In-house expenses for laboratory supplies and consumables increased by \$3.7 million, and reflect our increased research and development personnel. Facility related expenses increased by \$1.1 million to accommodate our increased research and development personnel and manufacturing expansion.

General and Administrative Expenses

General and administrative expenses were \$5.1 million for the year ended December 31, 2016 compared to \$6.1 million for the year ended December 31, 2017. The increase of \$1.0 million was primarily attributable to a \$0.6 million increase in personnel related costs as we expanded our headcount, and a \$0.5 million increase in outside services for patent, legal and professional services to support our ongoing operations.

Interest Income, Net

Interest income was \$0.2 million for the year ended December 31, 2016 compared to interest income of \$0.4 million for the year ended December 31, 2017. The income for both years represents interest and investment income from cash, cash equivalents and marketable securities. The increase of \$0.2 million was due to a higher average cash, cash equivalents and marketable securities balance in the year ended December 31, 2017, partially offset by interest expense incurred on our lease financing obligation.

Liquidity and Capital Resources**Sources of Liquidity**

From our inception through June 30, 2018, we have funded our operations primarily through private placements of our convertible preferred stock and have raised net cash proceeds of \$165.9 million from

the issuance of our convertible preferred stock. As of June 30, 2018, we had cash, cash equivalents and marketable securities of \$64.5 million. Key financing and corporate milestones include:

- In September 2015, we raised net proceeds of \$25.5 million from issuances of our Series A convertible preferred stock.
- In April 2016, we raised net proceeds of \$35.7 million from additional issuances of our Series A convertible preferred stock.
- In September and October 2017, we raised net proceeds of \$95.8 million from issuances of our Series B convertible preferred stock.
- In June, July and August 2018, we raised net proceeds of \$21.0 million from issuances of our Series C convertible preferred stock, including \$10.0 million from bluebird bio's investment.

Additionally, we do not expect positive cash flows from operations in the foreseeable future. Historically, we have incurred operating losses as a result of ongoing efforts to develop our personalized cancer immunotherapy candidate, including conducting ongoing research and development, preclinical studies and providing general and administrative support for these operations. We expect to continue to incur net operating losses for at least the next several years as we advance GRANITE-001, SLATE-001 and any future product candidates through clinical development, seek regulatory approval, prepare for and, if approved, proceed to commercialization, continue our research and development efforts and invest in our manufacturing facility.

Future Funding Requirements

We do not have any products approved for sale, and we have never generated any revenue from contracts with customers. We do not expect to generate any meaningful revenue unless and until we obtain regulatory approval of and commercialize any of our current and future product candidates and/or enter into collaboration agreements with third parties, and we do not know when, or if, either will occur. We expect to continue to incur significant losses for the foreseeable future, and we expect the losses to increase as we continue the development of, and seek regulatory approvals for, our current and future product candidates, and begin to commercialize any approved products. We are subject to all the risks typically related to the development of new product candidates, and we may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. Moreover, following the completion of this offering, we expect to incur additional costs associated with operating as a public company. We anticipate that we will need substantial additional funding in connection with our continuing operations.

Until we can generate a sufficient amount of revenue from the commercialization of our tumor-specific immunotherapy product candidates or from collaboration or license agreements with third parties, if ever, we expect to finance our future cash needs through public or private equity offerings or debt financings. Additional capital may not be available on reasonable terms, if at all. If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of one or more of our current or future product candidates. If we raise additional funds by issuing equity or convertible debt securities, it could result in dilution to our existing stockholders and increased fixed payment obligations. In addition, as a condition to providing additional funds to us, future investors may demand, and may be granted, rights superior to those of existing stockholders. If we incur indebtedness, we could become subject to covenants that would restrict our operations and potentially impair our competitiveness, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. Additionally, any future collaborations we enter into with

third parties may provide capital in the near term but we may have to relinquish valuable rights to our product candidates or grant licenses on terms that are not favorable to us. Any of the foregoing could significantly harm our business, financial condition and prospects.

Since our inception, we have incurred significant losses and negative cash flows from operations. We have an accumulated deficit of \$90.5 million through June 30, 2018. We expect to incur substantial additional losses in the future as we conduct and expand our research and development activities. These conditions raise substantial doubt about our ability to continue as a going concern for a period of one year from the date of the issuance of our 2017 financial statements. The accompanying audited financial statements and unaudited interim condensed financial statements and related notes have been prepared assuming that we will continue as a going concern, which contemplates the realization of assets and the settlement of liabilities and commitments in the normal course of business. The audited financial statements and unaudited interim condensed financial statements and related notes do not reflect any adjustments relating to the recoverability and classification of assets or amounts and classification of liabilities that might be necessary if we are unable to continue as a going concern.

We have based our projections of operating capital requirements on assumptions that may prove to be incorrect and we may use all our available capital resources sooner than we expect. Because of the numerous risks and uncertainties associated with research, development and commercialization of product candidates, we are unable to estimate the exact amount of our operating capital requirements. Our future capital requirements depend on many factors, including:

- the scope, progress, results and costs of developing our tumor-specific immunotherapy product candidates, and conducting preclinical studies and clinical trials, including our planned Phase 1/2 clinical trial of GRANITE-001, which we expect to initiate in the second half of 2018;
- the scope, progress, results and costs of conducting studies and clinical trials for our SLATE product candidate series, including the Phase 2 clinical trial for SLATE-001, which we expect to initiate in the second half of 2019;
- the timing of, and the costs involved in, obtaining regulatory approvals for our tumor-specific immunotherapy product candidates;
- the number and characteristics of any additional product candidates we develop or acquire;
- the timing and amount of any milestone, royalty or other payments we are required to make pursuant to any current or future collaboration or license agreements;
- the cost of manufacturing our tumor-specific immunotherapy product candidates we successfully commercialize, including the cost of scaling up our internal manufacturing operations;
- the cost of building a sales force in anticipation of product commercialization;
- the cost of commercialization activities, including building a commercial infrastructure, marketing, sales and distribution costs;
- our ability to maintain existing, and establish new, strategic collaborations, licensing or other arrangements and the financial terms of any such agreements, including the timing and amount of any future milestone, royalty or other payments due under any such agreement;
- any product liability or other lawsuits related to our products;
- the expenses needed to attract, hire and retain skilled personnel;
- the costs associated with being a public company;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing our intellectual property portfolio; and
- the timing, receipt and amount of sales of any future approved products, if any.

A change in the outcome of any of these or other variables with respect to the development of any of our current and future product candidates could significantly change the costs and timing associated with the development of that product candidate. Furthermore, our operating plans may change in the future, and we will need additional funds to meet operational needs and capital requirements associated with such operating plans.

Cash Flows

The following table sets forth a summary of the primary sources and uses of cash (in thousands):

	Year Ended December 31,		Six Months Ended June 30,	
	2016	2017	2017	2018
Cash used in operating activities	<u>\$(15,292)</u>	<u>\$(34,971)</u>	<u>\$(13,038)</u>	<u>\$(27,066)</u>
Cash (used in) provided by investing activities	(32,127)	(33,252)	6,870	17,363
Cash provided by financing activities	35,946	95,812	14	8,237
Net (decrease) increase in cash and cash equivalents	<u>\$(11,473)</u>	<u>\$ 27,589</u>	<u>\$ (6,154)</u>	<u>\$ (1,466)</u>

Cash Used in Operating Activities

During the six months ended June 30, 2018, cash used in operating activities was \$27.1 million, which consisted of a net loss of \$28.8 million, adjusted by non-cash charges of \$2.9 million and cash used due to changes in our operating assets and liabilities of \$1.1 million. The non-cash charges consisted primarily of depreciation and amortization expense of \$1.7 million and stock-based compensation of \$1.2 million. The change in our operating assets and liabilities was primarily due to a decrease of \$1.4 million in accounts payable and other accrued liabilities as a result of accrued bonus payments and vendor payments made during the first half of the year, and a decrease of \$0.5 million in prepaid expenses and other assets.

During the six months ended June 30, 2017, cash used in operating activities was \$13.0 million, which consisted of a net loss of \$14.6 million, adjusted by non-cash charges of \$1.3 million and cash used due to changes in our operating assets and liabilities of \$0.2 million. The non-cash charges consisted primarily of depreciation and amortization expense of \$0.8 million and stock-based compensation of \$0.5 million. The change in our operating assets and liabilities was primarily due to a decrease of \$0.4 million in accrued and other liabilities, and an increase of \$0.2 million in prepaid expenses and other assets.

During the year ended December 31, 2017, cash used in operating activities was \$35.0 million, which consisted of a net loss of \$41.4 million, adjusted by non-cash charges of \$2.9 million and cash provided by changes in our operating assets and liabilities of \$3.5 million. The non-cash charges consisted primarily of depreciation and amortization expense of \$1.8 million and stock-based compensation of \$1.1 million. The change in our operating assets and liabilities was primarily due to an increase of \$4.3 million in accounts payable and accrued liabilities. Our accrued liabilities increased due to employee bonuses and general business expenses, reflective of our increased headcount and expenses. This was partially offset by an increase of \$0.4 million in prepaid expenses and other current assets for prepaid research and development being conducted by third-party service providers.

During the year ended December 31, 2016, cash used in operating activities was \$15.3 million, which consisted of a net loss of \$18.8 million, adjusted by non-cash charges of \$1.6 million and cash provided by changes in our operating assets and liabilities of \$1.9 million. The non-cash charges

consisted primarily of depreciation and amortization expense of \$0.9 million and stock-based compensation of \$0.6 million. The change in our operating assets and liabilities was primarily due to an increase of \$2.1 million in deferred rent liability primarily associated with a tenant improvement allowance from our landlord, and an increase of \$0.8 million in accounts payable and accrued liabilities. Our accrued liabilities increased due to employee bonuses and general business expenses, reflective of our increased headcount and expenses. This was partially offset by an increase of \$0.9 million in prepaid expenses and other assets primarily associated with prepayments made for ongoing research and development being conducted by third-party service providers and security deposits for our leased facilities.

Cash Used in Investing Activities

During the six months ended June 30, 2018, cash provided by investing activities was \$17.4 million, which consisted of \$20.2 million in proceeds from the maturity of marketable securities, offset by \$2.9 million of capital expenditures to purchase property and equipment.

During the six months ended June 30, 2017, cash provided by investing activities was \$6.9 million, which consisted of \$26.9 million in proceeds from the maturity of marketable securities, offset by \$16.3 million of purchases of marketable securities and \$3.4 million of capital expenditures to purchase property and equipment.

During the year ended December 31, 2017, cash used in investing activities was \$33.3 million, which consisted of \$63.2 million of purchases of marketable securities, \$11.5 million of capital expenditures to purchase property and equipment, offset by \$41.5 million in proceeds from the maturity of marketable securities.

During the year ended December 31, 2016, cash used in investing activities was \$32.1 million, which consisted of \$48.0 million of purchases of marketable securities, \$7.0 million of capital expenditures to purchase property and equipment, offset by \$22.9 million in proceeds from the maturity of marketable securities.

Cash Provided by Financing Activities

During the six months ended June 30, 2018, cash provided by financing activities was \$8.2 million, which primarily consisted of \$8.9 million in net proceeds from the issuances of shares of our Series C convertible preferred stock, offset by \$0.8 million paid for deferred offering costs associated with preparation for our initial public offering.

During the six months ended June 30, 2017, cash provided by financing activities was \$14,000, which consisted of proceeds from the purchase of common stock under our equity incentive plan.

During the year ended December 31, 2017, cash provided by financing activities was \$95.8 million, which primarily consisted of net proceeds from the issuances of shares of our convertible preferred stock.

During the year ended December 31, 2016, cash provided by financing activities was \$35.7 million, which primarily consisted of net proceeds from the issuances of shares of our convertible preferred stock.

Since our inception through June 30, 2018, we have raised an aggregate of approximately \$166.0 million through the issuance and sale of shares of our convertible preferred stock, net of \$0.4 million in issuance costs, which we have used to fund our operations. During 2018, net proceeds from our sale of Series C convertible preferred stock were \$11.0 million including our July 2018 sale of Series C preferred stock. During 2017, net proceeds from our sale of Series B convertible preferred stock were \$95.8 million. During 2016, net proceeds from our sale of Series A convertible preferred stock were \$35.7 million.

Off-Balance Sheet Arrangements

We have not entered into any off-balance sheet arrangements, as defined under SEC rules.

Contractual Obligations and Commitments

The following table summarizes our contractual obligations as of December 31, 2017 (in thousands):

	Payments Due by Period				
	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Operating leases(1)	\$ 8,410	\$ 1,642	\$3,451	\$2,921	\$ 396
Lease financing obligation(1)	5,768	708	1,612	1,711	1,737
Total obligations	<u>\$14,178</u>	<u>\$ 2,350</u>	<u>\$5,063</u>	<u>\$4,632</u>	<u>\$ 2,133</u>

(1) See Note 6 to our financial statements included elsewhere in this prospectus.

We are party to license agreements pursuant to which we have in-licensed various intellectual property rights. The license agreements obligate us to make certain milestone payments related to achievement of specified events, as well as royalties in the low-single digits based on sales of licensed products. None of these events had occurred as of December 31, 2017, and no royalties were due from the sales of licensed products. The table above does not include any milestone or royalty payments to the counterparties to these agreements as the amounts, timing and likelihood of such payments are not known. See Note 7 to our financial statements for additional information.

In September 2017, we entered into a contract research and development agreement with a third party CRO to provide research, analysis and antibody samples to further the development of our personalized immunotherapy candidate in the treatment of cancer. Under the agreement, we paid an upfront payment of \$0.5 million to the CRO. The upfront payment has been capitalized and will be recognized as research and development expense using the straight-line method over the term of the agreement, which is one year. We are also obligated to pay up to \$0.4 million to the CRO upon the completion of certain phases of the research services. These costs will be recorded to research and development expense over the expected period of each phase of the research services. We are also obligated to pay the CRO certain milestone payments of up to \$36.4 million on achievement of specified events. None of these events had occurred as of June 30, 2018. However, we are unable to estimate the timing or likelihood of achieving the milestones and, therefore, any related payments are not included in the table above.

Critical Accounting Policies and Use of Estimates

This discussion and analysis of financial condition and results of operation is based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States, or GAAP. The preparation of financial statements requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities as of the date of the financial statements and the reported amounts of expenses during the reporting period. On an ongoing basis, management evaluates its estimates, including those related to preclinical study trial accruals, fair value of assets and liabilities, and the fair value of common stock and stock-based compensation. Management bases its estimates on historical experience and on various other market-specific and relevant assumptions that management believes to be reasonable under the circumstances. Actual results could differ from those estimates.

While our significant accounting policies are more fully described in the notes to our audited financial statements included elsewhere in this prospectus, we believe that the following accounting policies are critical to the process of making significant judgments and estimates in the preparation of our financial statements and understanding and evaluating our reported financial results.

Research and Development Expenses

We record research and development expenses to operations as incurred. Research and development expenses represent costs incurred by us for the discovery and development of our product candidates and the development of our technology and include: internal research and development expense, including employee-related expenses, including salaries, benefits, travel and non-cash stock-based compensation expense; external research and development expenses incurred under arrangements with third parties, such as CROs, preclinical testing organizations, CMOs, academic and non-profit institutions and consultants; license fees; and other expenses, which include direct and allocated expenses for laboratory, facilities and other costs. Costs to develop our technologies are recorded as research and development expense unless the criteria to be capitalized as internal-use software costs is met.

As part of the process of preparing financial statements, we are required to estimate and accrue expenses. We record the estimated expenses of research and development activities conducted by third-party service providers based upon the estimated amount of services provided within research and development expense in the statements of operations and comprehensive loss. These services include the conduct of preclinical studies, contract manufacturing activities and consulting services. Payments made prior to the receipt of goods or services to be used in research and development are deferred and recognized as expense in the period in which the related goods are received or services are rendered. If the costs have been prepaid, this expense reduces the prepaid expenses in the balance sheet, and if not yet invoiced, the costs are included in accrued liabilities in the balance sheet. These costs are a significant component of our research and development expenses. We record amortization of prepaid expenses or accrued expenses for these costs based on the estimated amount of work completed and in accordance with agreements established with these third parties.

Costs for certain research and development activities are recognized based on an evaluation of the progress to completion of specific tasks. We estimate the amount of work completed through discussions with internal personnel and external service providers as to the progress or stage of completion of the services and the agreed-upon fee to be paid for such services. We make significant judgments and estimates in determining the accrued balance in each reporting period. As actual costs become known, we adjust our accrued estimates. Although we do not expect our estimates to be materially different from amounts actually incurred, our understanding of the status and timing of services performed may vary from our estimates and could result in us reporting amounts that are too high or too low in any particular period. Our accrued expenses are dependent, in part, upon the receipt of timely and accurate reporting from external CROs and other third-party service providers. To date, we have not experienced material differences between our accrued expenses and actual expenses.

We have and may continue to enter into license agreements to access and utilize certain technology. We evaluate if the license agreement is an acquisition of an asset or a business. To date none of our license agreements have been considered to be an acquisition of a business. For asset acquisitions, the upfront payments to acquire such licenses, as well as any future milestone payments made before product approval, are immediately recognized as research and development expense when due, provided there is no alternative future use of the rights in other research and development projects. These license agreements may also include contingent consideration in the form of cash. We assess whether such contingent consideration meets the definition of a derivative.

Stock-Based Compensation

We measure stock-based compensation expense for stock options granted to our employees and directors on the date of grant and recognize the corresponding compensation expense of those awards over the requisite service period, which is generally the vesting period of the respective award. We account for stock-based compensation arrangements with non-employee consultants using a fair value approach. The estimated fair value of unvested options granted to non-employee consultants is remeasured at each reporting date through the date of final vesting. As a result, the noncash charge to operations for nonemployee options with vesting conditions is affected in each reporting period by changes in the estimated fair value of our common stock. Forfeitures of awards are estimated based on historical forfeiture experience and the experience of other companies in the same industry. The estimate of forfeitures will be adjusted over the service period to the extent that actual forfeitures differ, or are expected to differ, from prior estimates.

We estimate the fair value of stock options granted to our employees and directors on the grant date, and the resulting stock-based compensation expense, using the Black-Scholes option-pricing model. The Black-Scholes option-pricing model requires the use of subjective assumptions which determine the fair value of stock-based awards. These assumptions include:

- *Expected Term.* Our expected term represents the period that our stock options are expected to be outstanding and is determined using the simplified method (based on the mid-point between the vesting date and the end of the contractual term), as we do not have sufficient historical data to use any other method to estimate expected term.
- *Expected Volatility.* As there has been no public market for our common stock to date, and as a result we do not have any trading history of our common stock, expected volatility is estimated based on the average volatility for comparable publicly traded biopharmaceutical companies over a period equal to the expected term of the stock option grants. The comparable companies are chosen based on their similar size, stage in the life cycle or area of specialty.
- *Risk-Free Interest Rate.* The risk-free interest rate is based on the U.S. Treasury zero coupon issues in effect at the time of grant for periods corresponding with the expected term of the stock option grants.
- *Expected Dividend Yield.* We have never paid dividends on our common stock and have no plans to pay dividends on our common stock. Therefore, we use an expected dividend yield of zero.

For options granted to non-employee consultants, the fair value of the unvested portion of the options is also remeasured using the Black-Scholes option-pricing model reflecting the same assumptions as applied to employee options in each of the reported periods, other than the expected life, which is assumed to be the remaining contractual life of the option.

As there has been no public market for our common stock to date, the estimated fair value of our common stock has been determined by our board of directors, with input from management, considering our most recently available third-party valuations of common stock and our board of directors' assessment of additional objective and subjective factors that it believed were relevant, and factors that may have changed from the date of the most recent valuation through the date of the grant. These factors include, but are not limited to: our most recently available valuations of our common stock by an unrelated third party; the prices at which we sold shares of our convertible preferred stock to outside investors in arms-length transactions; the rights, preferences and privileges of our convertible preferred stock relative to those of our common stock; our results of operations, financial position and capital resources; current business conditions and projections; the lack of marketability of our common stock; the hiring of key personnel and the experience of management; the risk inherent in the development of our products; our stage of development and material risks related to

its business; the fact that the option grants involve illiquid securities in a private company; and the likelihood of achieving a liquidity event, such as an initial public offering or sale, in light of prevailing market conditions.

We have periodically determined the estimated fair value of our common stock at various dates using contemporaneous valuations performed in accordance with the guidance outlined in the American Institute of Certified Public Accountants' Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, or the Practice Aid. The Practice Aid identifies various available methods for allocating enterprise value across classes and series of capital stock to determine the estimated fair value of common stock at each valuation date. In accordance with the Practice Aid, our board of directors considered the following methods:

- *Current Value Method.* Under the Current Value Method, or CVM, our value is determined based on our balance sheet. This value is then first allocated based on the liquidation preference associated with preferred stock issued as of the valuation date, and then any residual value is assigned to the common stock.
- *Option-Pricing Method.* Under the option-pricing method, or OPM, shares are valued by creating a series of call options with exercise prices based on the liquidation preferences and conversion terms of each equity class. The estimated fair values of the preferred and common stock are inferred by analyzing these options.
- *Probability-Weighted Expected Return Method.* The probability-weighted expected return method, or PWERM, is a scenario-based analysis that estimates value per share based on the probability-weighted present value of expected future investment returns, considering each of the possible outcomes available to us, as well as the economic and control rights of each share class.

Our board of directors and management develop best estimates based on application of these approaches and the assumptions underlying these valuations, giving careful consideration to the advice from our third-party valuation expert. Such estimates involve inherent uncertainties and the application of significant judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our equity-based compensation could be materially different. Following the closing of this offering, our board of directors will determine the fair market value of our common stock based on its closing price as reported on the date of grant on the primary stock exchange on which our common stock is traded.

The intrinsic value of all outstanding options as of June 30, 2018 was approximately \$ million, based on the assumed initial public offering price of \$ per share, the midpoint of the range set forth on the cover page of this prospectus, of which approximately \$ million is related to vested options and approximately \$ million is related to unvested options.

Leases, Deferred Rent and Lease Financing Accounting

We rent our office space and facilities under non-cancelable operating lease agreements and recognize related rent expense on a straight-line basis over the term of the lease. Our lease agreements contain rent holidays, scheduled rent increases and renewal options. Rent holidays and scheduled rent increases are included in the determination of rent expense to be recorded ratably over the lease term. We do not assume renewals in its determination of the lease term unless they are deemed to be reasonably assured at the inception of the lease. We begin recognizing rent expense on the date that we obtain the legal right to use and control the leased space. Deferred rent consists of the difference between cash payments and the recognition of rent expense on a straight-line basis for the buildings we occupy.

Funding of leasehold improvements by our landlord is accounted for as a tenant improvement allowance and recorded as current and non-current deferred rent liabilities and amortized on a straight-line basis as a reduction of rent expense over the term of the lease.

In certain arrangements, we are involved in the construction of improvements to buildings we are leasing. To the extent we are involved with the structural improvements of the construction project or take construction risk, we are considered to be the owner of the building and related improvements for accounting purposes during the construction period. Therefore, we record the fair value of the building subject to the lease within property and equipment on the balance sheet, plus the amount of building improvements incurred and funded by us and/or the landlord as of the balance sheet date. We also record a corresponding lease financing obligation on our balance sheet representing the amounts financed by the lessor for the building and lessor financed improvements. Lessor financed improvement incentives due but not yet received are recorded as prepaid expense and other current assets on the balance sheet.

Once construction is completed, we consider the requirements for sale-leaseback accounting treatment, including evaluating whether all risks of ownership have been transferred back to the landlord, as evidenced by a lack of our continuing involvement in the leased property. If we conclude the arrangement does not qualify for sale-leaseback accounting treatment, the building and improvements remain on our balance sheet and are subject to depreciation and assessment of impairment. We bifurcate our lease payments into a portion allocated to the lease financing obligation and a portion allocated to the parcel of land on which the building has been built. The portion of the lease payments allocated to the land is treated for accounting purposes as operating lease payments, and therefore is recorded as rent expense in the statements of operations and comprehensive loss. The portion of the lease payments allocated to the lease financing obligation is further bifurcated into a portion allocated to interest expense and a portion allocated to reduce the lease financing obligation.

The interest rate used for the lease financing obligation represents our estimated incremental borrowing rate at the inception of the lease, adjusted to reduce any built-in loss. The initial recording of these assets and liabilities is classified as non-cash investing and financing items, respectively, for purpose of the statements of cash flows.

The most significant estimates used by management in accounting for the lease financing transaction and the impact of these estimates are as follows:

- *Incremental borrowing rate.* We estimate our incremental borrowing rate as the rate we would have incurred to borrow, based on our credit quality at the inception of the lease over a similar term, the funds necessary to purchase the leased building subject to the financing lease transaction. The incremental borrowing rate is used in determining allocating our rental payments between interest expense and a reduction of the outstanding lease financing obligation.
- *Land capitalization rate.* The land capitalization rate is the rate of return on the land underlying the lease properly considering expected income that the land would be expected to generate. The land lease capitalization rate is estimated using comparable market data for land capitalization rates for similar properties. The land capitalization rate is used in determining allocating our rental payments between interest expense and a reduction of the outstanding lease financing obligation.
- *Fair value of leased building and underlying land.* The fair value of a leased building and underlying land subject to the lease financing transaction is based on comparable market data for similar properties as of the lease inception date. The fair value of the underlying land is used in determining allocating our rental payments between interest expense and a reduction of the outstanding lease financing obligation.

In March 2017, we entered into a non-cancelable lease for 42,620 square feet of office, cleanroom, and laboratory support manufacturing space in Pleasanton, California. Subsequently, in April 2017, we took possession of the space. In connection with the lease, we received a tenant improvement allowance of \$1.2 million from the landlord for the costs associated with the design, development and construction of tenant improvements for the Pleasanton facility building. The scope of the tenant improvements did not qualify under the lease accounting guidance as “normal tenant improvements” and we were the deemed owner of the leased building during the construction period for accounting purposes. In November 2017, construction on the facility was substantially completed and the leased property was placed into service. We determined that the completed construction project did not qualify for sale-leaseback accounting due to the collateral held by the landlord in the form of a letter of credit and will instead be accounted for as a financing transaction. The leased building for the Pleasanton facility and related improvements remains on our balance sheet as of June 30, 2018 and rental payments associated with the lease have been allocated to operating lease expense for the ground underlying the leased building and principal and interest payments on the lease financing obligation.

JOBS Act

We are an emerging growth company under the JOBS Act. As an emerging growth company, we may delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have nonetheless irrevocably elected not to avail ourselves of this exemption and, as a result, upon completion of this offering we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

We will remain an emerging growth company until the earliest of (1) the last day of the fiscal year following the fifth anniversary of the consummation of this offering, (2) the last day of the fiscal year in which we have total annual gross revenue of at least \$1.07 billion, (3) the last day of the fiscal year in which we are deemed to be a “large accelerated filer” as defined in Rule 12b-2 under the Exchange Act, which would occur if the market value of our common stock held by non-affiliates exceeded \$700.0 million as of the last business day of the second fiscal quarter of such year or (4) the date on which we have issued more than \$1.0 billion in non-convertible debt securities during the prior three-year period.

Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Sensitivity

We are exposed to market risk related to changes in interest rates. We had cash, cash equivalents and marketable securities of \$64.5 million as of June 30, 2018, which consisted primarily of money market funds and marketable securities, largely composed of investment grade, short-term fixed income securities.

The primary objective of our investment activities is to preserve capital to fund our operations. We also seek to maximize income from our investments without assuming significant risk. To achieve our objectives, we maintain a portfolio of investments in a variety of securities of high credit quality and short-term duration, according to our board-approved investment charter.

Our investments are subject to interest rate risk and could fall in value if market interest rates increase. A hypothetical 10% relative change in interest rates during any of the periods presented would not have had a material impact on our financial statements.

Recent Accounting Pronouncements

See Note 2 to our audited financial statements and unaudited interim condensed financial statements and related notes included elsewhere in this prospectus.

BUSINESS

Overview

We are an immuno-oncology company developing tumor-specific cancer immunotherapies to fight multiple cancer types. Our approach harnesses the natural power of a patient's own immune system to recognize short tumor-specific peptide sequences presented on cancer cells, referred to as tumor-specific neoantigens, or TSNA, in order to destroy tumor cells. We expect to initiate a Phase 1/2 clinical trial of our first personalized immunotherapy product candidate, GRANITE-001, in the second half of 2018 for the treatment of multiple common solid tumors. Our tumor-specific immunotherapy treatment is built on two key pillars—first, our proprietary Gritstone EDGE™ platform, which gives us a superior ability to predict, from a routine tumor biopsy, the TSNA that are presented on a patient's tumor cells; and second, our ability to develop and manufacture a potent immunotherapy utilizing patients' TSNA to drive the patient's immune system to attack and destroy tumors. Our tumor-specific immunotherapy portfolio consists of our personalized immunotherapy product candidate, GRANITE-001, which is manufactured uniquely for each patient, and our off-the-shelf immunotherapy product candidate series, SLATE, which is designed for selected subsets of patients with common tumor neoantigens. Our tumor-specific immunotherapy candidates are designed to fit easily into a community oncology setting and to be administered in earlier lines of treatment, in combination with checkpoint inhibitors to further drive a robust T cell response, rather than only in refractory or relapsed cancers.

Immuno-oncology represents one of the most significant advances in the history of cancer treatment. In 2014, the first checkpoint inhibitor was approved and today, despite only a modest breadth of efficacy across patients, this class of therapies is predicted to reach over \$32 billion in combined global sales by 2022. However, because checkpoint inhibitors work through relatively non-specific stimulation of occasional, pre-existing, tumor-specific T cells, they are effective in only a subset of patients, with objective responses (substantial tumor shrinkage) observed in 0-20% of all patients with cancer of the lung, breast, prostate, colon/rectum and ovary (the major lethal solid tumor types). Many patients appear not to possess meaningful numbers of T cells that recognize their tumor (so-called "cold" tumors). We believe the path to broader immuno-oncology efficacy and more meaningful clinical responses resides in the *de novo* generation of new, potent, tumor-specific T cell responses.

The first pillar of our tumor-specific cancer immunotherapy approach is our understanding of TSNA and the application of our artificial intelligence based, proprietary Gritstone EDGE platform to predict the presence of a patient's unique TSNA on tumor cells. While there are frequently hundreds of mutations in the DNA of a tumor cell, only approximately 1% of these mutations are actually transcribed, translated and processed into a unique "non-self" peptide sequence that is presented on the surface of tumor cells and can therefore be recognized by the patient's own T cells. Furthermore, these rare TSNA are almost all unique to each individual patient's tumor. Current technologies cannot predict the presence of TSNA with sufficient accuracy to design a therapy that is likely to be effective. The Gritstone EDGE platform consists of proprietary machine learning models that use DNA/RNA sequence data derived from a patient's tumor biopsy to predict which mutations will generate TSNA most likely to be presented on the tumor cell surface. Applying our EDGE platform to sequence data from human tumors, we have shown a nine-fold improvement in the accuracy of prediction with our platform compared to publicly available approaches.

The second pillar of our tumor-specific cancer immunotherapy approach is our ability to develop and manufacture a patient-specific therapeutic to direct a robust T cell response to those TSNA predicted to be presented on the patient's tumor. Our tumor-specific immunotherapy candidates, GRANITE-001 and SLATE-001, comprise a sequential immunization of a viral prime and RNA boosts delivered by intramuscular injection, which we refer to as our heterologous prime-boost. In our GRANITE-001 product candidate each of the viral prime and RNA boost immunizations contain a

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patient-specific set of predicted TSNA, whereas the viral prime and RNA boost in our SLATE product candidate series contains a fixed TSNA cassette that is designed for the subset of patients who carry these antigens. Grounded in traditional infectious disease vaccine immunology, this two-step immunization utilizes a prime and a boost to educate the patient's T cells to detect TSNA and destroy tumor cells. In non-human primate models, we have demonstrated a profound and specific CD8+ and CD4+ T cell response to antigens administered in this way.

Our personalized immunotherapy process begins with a routine tumor biopsy from the patient. We utilize our in-house sequencing capabilities on the tumor sample and then apply our proprietary EDGE platform to derive a set of predicted TSNA likely to be presented on the patient's tumor. Using these TSNA, we design a highly potent personalized immunotherapy candidate containing the relevant neoantigens to be administered by simple intramuscular injection. We have designed each of our tumor-specific immunotherapy candidates such that oncologists will not have to alter their treatment practices, and we believe this will extend the utility of our medicines into the community oncology setting and not limit their use to scarce centers of excellence. We believe that as a result of its design, our tumor-specific immunotherapy candidate has the potential to expand the efficacy of immunotherapy into broader patient populations.

We intend to initiate a first-in-human Phase 1/2 clinical trial of our first personalized immunotherapy product candidate, GRANITE-001, in the second half of 2018, evaluating it in the treatment of common solid tumors, including metastatic non-small cell lung cancer, or NSCLC, and gastroesophageal, bladder and microsatellite stable, or MSS, colorectal cancers, in each case in combination with checkpoint inhibitors. The Phase 1 portion of our Phase 1/2 trial will seek to establish a dose for further investigation in Phase 2 and to evaluate safety, tolerability and, importantly, immunogenicity of our lead product candidate. We will seek to further evaluate efficacy and safety in the Phase 2 cohort expansion portion in several common solid tumor types. In July 2018, we entered into a clinical trial collaboration and supply agreement with Bristol-Myers Squibb Company to evaluate the safety and tolerability of GRANITE-001 in combination with OPDIVO (nivolumab) and in combination with OPDIVO plus YERVOY (ipilimumab), in patients with advanced solid tumors.

We will follow the initiation of our personalized clinical program with a Phase 2 clinical trial of SLATE-001, our first off-the-shelf, TSNA-directed immunotherapy product candidate in the second half of 2019. SLATE-001 utilizes the same heterologous prime boost approach as GRANITE-001 but contains a fixed cassette with TSNA that are shared across a subset of cancer patients rather than a cassette unique to an individual patient, providing us with an off-the-shelf alternative to our personalized manufactured product, GRANITE-001. SLATE-001 has the benefit of being readily available for rapid initiation of therapy, and is less expensive to manufacture than a personalized product. Early analyses suggest that while each such shared neoantigen may only be found in less than 2% of patients with a particular tumor type, our heterologous prime-boost can contain at least 20 of these TSNA, which we believe will result in the off-the-shelf product having an addressable population of approximately 10-15% of patients within common solid tumor types such as colorectal cancer and lung cancer. Our off-the-shelf product candidates are specific to a particular tumor type, and the TSNA module is fixed for each product. As a result, the essential aspect to the utilization of the off-shelf-product candidate is the ability to accurately identify patients whose tumors contain at least one of the TSNA represented within the off-the-shelf product candidate. Today, this can be simply achieved by screening the patient's tumor using commercially-available genomic screens and identifying the patient's HLA type from blood with a standard clinical assay.

We are also leveraging our expertise in cancer genomics and our tumor antigen discovery platform to identify novel peptide sequences (not mutated) that may be shared across common tumor types (tumor-specific shared antigens), which we believe are likely to have value as targets to direct T cells onto tumors specifically. Shared antigen targets enable us to opportunistically partner or develop

additional therapeutic approaches to redirect T cells onto tumors using these highly specific targets. Additional approaches include modifying the receptors of the patient's own T cells to help them recognize tumor targets (adoptive T cell therapy) and/or using small adapter proteins that have two recognition arms—one for tumors and one for T cells (bisppecific antibodies). In August 2018, we announced our first collaboration supporting this strategy with bluebird bio, Inc., or bluebird bio, whereby we will identify up to ten tumor-specific targets and associated T cell receptors for therapeutic application within bluebird bio's cell therapy platform.

The ability to control the manufacturing of a high-quality tumor-specific immunotherapy products, and scale production if early data are positive, is critical for efficient clinical development and commercialization. We have invested significant resources in our Cambridge, Massachusetts sequencing lab and our Pleasanton, California manufacturing facility to address these needs and position ourselves to control the critical steps in the production of our tumor-specific immunotherapy candidates.

To deliver on the promise of our novel therapeutic approach, we have assembled a highly experienced management team with focused expertise in each of our core disciplines of cancer genomics, immunology and vaccinology, clinical development, regulatory, and biomanufacturing from several leading biotechnology companies, including Clovis Oncology, Inc., Pfizer Inc., Genentech, Inc. and Foundation Medicine, Inc. Our co-founder Dr. Andrew Allen brings experience as a co-founder and Chief Medical Officer of Clovis Oncology, Inc., with prior experience in various leadership roles at Pharmion Corporation and Chiron Corporation, where he worked on Proleukin (IL-2), the first cancer immunotherapy. The scientific advisory board includes selected experts in relevant disciplines, including Dr. Timothy Chan (Memorial Sloan Kettering Cancer Center) and Dr. Naiyer Rizvi (Columbia University Medical Center) who together first demonstrated that TSNA are key T cell targets in cancer patients responding to checkpoint inhibitor therapy, as well as Dr. James Gulley (National Cancer Institute) who is an international expert in cancer immunotherapy with a focus on vaccines.

Our Strategy

We have assembled a team of industry leaders, each possessing specific expertise that allows us to build and deploy our proprietary EDGE platform to predict tumor-specific T cell targets and deliver personalized cancer immunotherapies to patients. Our goal is to eradicate cancer by initially developing personalized immunotherapies that focus on the unique and individual nature of a patient's tumor. Our strategy to achieve this includes the following key components:

- **Rapidly advance GRANITE-001, our lead product candidate, in multiple clinical settings, with the objective of generating a significant CD8+ T cell response to tumor-specific neoantigens.** GRANITE-001 is our first personalized immunotherapy product candidate. It is engineered to elicit a significant T cell response to selected antigens in humans (particularly CD8+ T cell responses) based upon extensive clinical experience with many different vectors in the realm of infectious disease. We have studied these clinical data closely and applied key learnings to the design and development of our immunotherapy platform. We have submitted our IND for GRANITE-001 and we intend to initiate a first-in-human Phase 1/2 trial of our heterologous prime-boost regimen in combination with checkpoint inhibitors in the second half of 2018. Upon completion of the Phase 1 portion of the trial, we intend to demonstrate proof of concept in the Phase 2 portion of the trial, which will consist of single-arm cohort expansions in "cold" tumors (such as MSS colorectal cancer) where checkpoint inhibitors alone have very low efficacy, and in randomized cohorts in typically more inflamed tumors (such as lung, gastric or bladder cancer), where checkpoint inhibitors are known to have some activity but recurrence remains expected.
- **Invest in our Gritstone EDGE platform and maximize its utility across modalities.** Using contemporary sequencing and machine learning approaches, we have developed our EDGE

platform to accurately predict the antigenic landscape of a tumor that allows for its select targeting with personalized immunotherapy. The EDGE platform utilizes proprietary machine learning models and an extensive dataset of over a million HLA-presented peptides from over 300 human tumor and matched normal tissue specimens. We are initially applying the platform to develop multiple formats of personalized cancer immunotherapy candidates—including our heterologous prime-boost immunization containing TSNA (our lead program) as well as “off-the-shelf” therapies targeting shared tumor-specific antigens—in order to maximize the utility of our prediction capabilities across modalities. We intend to continually make investments to improve the EDGE platform’s prediction capabilities in order to develop more efficacious medicines. Genomic and immune response data from our clinical trials will serve to further validate and refine our machine learning platform.

- **Build upon the discoveries from our Gritstone EDGE platform to rapidly move SLATE-001, our shared-TSNA product candidate, into multiple clinical settings where shared neoantigens may have utility.** This includes—but will not be limited to—KRAS-driven tumors such as colorectal cancer, pancreatic ductal carcinoma and adenocarcinomas of the lung. We plan to submit an IND for SLATE-001 in the second half of 2019, and start Phase 2 clinical trials if and when data from GRANITE-001 have confirmed acceptable safety and immunogenicity of our prime-boost vaccine platform, together with Phase 2 dosing recommendations.
- **Continue to build our in-house manufacturing capabilities to maintain the highest controls on quality and capacity.** We believe the speed, quality, reliability and scalability of our manufacturing capabilities will be a core competitive advantage to our clinical development and commercial success, and we have invested extensively in building our own manufacturing facilities. We intend to internalize the majority of the manufacturing steps to drive down both cost and production time, as well as establish full control over intellectual property and product quality. We believe that operating our own manufacturing facility will provide us with enhanced control of material supply for both clinical trials and the commercial market, will enable the more rapid implementation of process changes, and will allow for better long-term margins.
- **Move tumor-specific immunotherapy into community oncology settings and earlier lines of treatment.** We are designing our tumor-specific immunotherapy product candidates to fit into a community oncology setting, where the vast majority of cancer patients are treated. We start with routine tumor biopsies, employ our EDGE platform to create a personalized immunotherapy, and administer it as an intramuscular injection. This approach is designed to enable oncologists to integrate our tumor-specific immunotherapy product candidates into their treatment practices without requiring a change in the current treatment paradigm. We believe this strategy has the potential to extend the use of our medicines into the community setting, enabling rapid trial execution, and expanding commercial use beyond limited centers of research excellence. Additionally, we intend to develop our tumor-specific immunotherapy product candidates in earlier lines of treatment, where recent clinical data with other forms of immunotherapy suggest efficacy is likely to be stronger, versus being only used in highly refractory or late-stage cancer patients. This intention is enabled by new liquid biopsy techniques whereby the reliable detection of minute amounts of tumor-derived DNA in blood can be used both to stratify patients (identify those at high risk of disease recurrence or progression even if imaging data suggests eradication of disease) and to offer a surrogate endpoint for more rapid assessment of therapeutic efficacy versus traditional clinical endpoints.
- **Enter into collaborations to realize the full potential of our platform.** The breadth of our EDGE platform enables its application to a variety of therapeutic formats, including cell therapy, bispecific antibodies and other areas where shared tumor (neo)antigens could be impactful to cancer treatment. We intend to form collaborations around certain aspects of our platform, such as shared tumor antigens, as we believe we will benefit from the resources and capabilities of

other organizations in the manufacture, development and commercialization of such diverse immunotherapies. Aligned with this strategy, our strategic collaboration with bluebird bio involves use of our EDGE platform to identify tumor-specific targets and associated T cell receptors for clinical application within bluebird bio's cell therapy platform.

Immuno-Oncology and Tumor-Specific Neoantigens

Immuno-oncology is an emerging field of cancer therapy that aims to activate the immune system to enhance and/or create anti-cancer immune responses, as well as to overcome the immuno-suppressive mechanisms that cancer cells have developed against the immune system. It is now well established that the immune system can, on occasion, successfully eliminate all tumor cells, leading to long-term benefit, even cures, in some patients with solid tumors. The primary challenge in immuno-oncology is to extend this useful biology to many more cancer patients, and to do so earlier in the treatment paradigm. Understanding which cells of the immune system are critical, what they recognize on tumor cells, and why they are typically absent or ineffective in cancer patients is core to overcoming this challenge. T cells are the vital foot soldiers in the immune attack upon cancer cells. T cells have evolved to recognize "foreign" markers on cells infected by viruses, and DNA mutations, which are a hallmark of cancer, often lead to the generation of such "foreign" markers, which are different from normal or "wild-type" proteins. Exploitation of this cancer cell vulnerability using new biological and computational tools lies at the heart of our lead program.

Critical Importance of T Cells

The most critical components of the immune response to tumors are T cells, white blood cells which mature in the thymus gland. T cells can be classified into two major subsets, CD4+ T cells and CD8+ T cells, based on expression of CD4 or CD8 markers on the surface of the T cell. CD4+ T cells (also referred to as helper T cells) provide help to the immune response by secreting cytokines that enhance the activation, expansion, migration and effector functions of other types of immune cells. CD8+ T cells (also referred to as cytotoxic or "killer" T cells) can directly attack and kill cells they recognize as abnormal. An activated CD8+ T cell attacks and kills a target cell when the T cell encounters its target and the T cell receptor, or TCR, recognizes and binds to a specific protein complex on the target cell. This protein complex is comprised of a short peptide (fragment of a protein) bound to a platform molecule called, in humans, the human leukocyte antigen, or HLA, complex. This HLA/peptide complex is the antigen recognized by a T cell receptor.

One of the primary functions of T cells is to detect and eliminate normal cells that have been infected by a virus. To accomplish this, T cells are "trained" in the thymus early in life to differentiate between HLA/peptide complexes that are "self" derived (an HLA presenting a peptide derived from a normal self-protein) and those that are "foreign" or "non-self" (an HLA presenting a peptide derived from a non-self-protein such as a viral protein). When the immune system develops early in life, T cells that recognize self peptides are eliminated in the thymus to avoid the risk of an auto-immune reaction, in a process called central tolerance. T cells that recognize a non-self peptide are nurtured and sent from the thymus to patrol the body, looking for evidence of non-self markers on cells, such as virally infected cells. Because cancer cells carry DNA mutations, which may alter protein/peptide sequences, tumor cells can also present non-self peptides bound to HLA platforms on the cell surface and, as a result, can be recognized and destroyed by T cells. In this case, the DNA mutation in a tumor creates a novel non-self peptide sequence, which, if it can be recognized by a TCR, is called a tumor-specific neoantigen, or TSNA.

Tumor-Specific Neoantigens

The notion that T cells can recognize TSNA on the surface of tumor cells is well established. It is only recently, however, that tools and techniques have been developed to test this idea in humans.

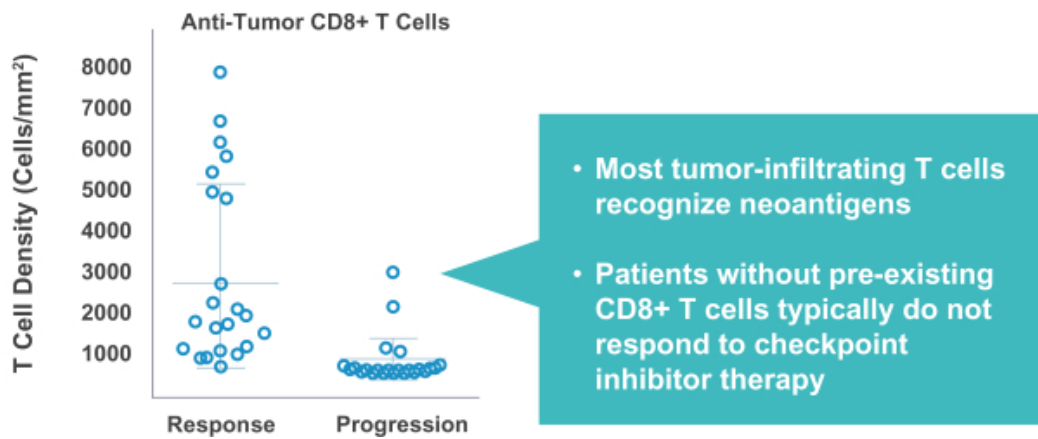
Two advances proved critical. First, the advent of checkpoint inhibitors provided cohorts of cancer patients who developed immune responses that destroyed their tumors, leading to clinical responses that could be studied at a molecular level. Second, the development of fast, inexpensive DNA and RNA sequencing techniques provided the ability to sequence and catalog tumor DNA mutations that might give rise to neoantigens. T cells from cancer patients who had responded well to checkpoint inhibitors could then be screened against candidate neoantigens to see if the patient data supported the hypothesis that T cell recognition of TSNA could kill tumor cells effectively.

In 2014 and 2015, two of our co-founders, Dr. Timothy Chan and Dr. Naiyer Rizvi, brought these two concepts together in papers demonstrating that melanoma and lung cancer patients who responded to checkpoint inhibitor therapies had developed T cells that recognized TSNA (Snyder et al., *The New England Journal of Medicine* (2014); Rizvi et al., *Science* (2015)). Further evidence from Dr. Steven Rosenberg (Center for Cancer Research) and Dr. Ton Schumacher (Netherlands Cancer Institute) demonstrated that in patients with solid tumors, T cells could be found infiltrating tumors which were specific for TSNA, and could be expanded and used therapeutically to kill tumor cells (Stevanovic et al., *Science* (2017); Schumacher and Schreiber, *Science* (2015)). Together, this body of research suggests that in patients with common solid tumors, T cells can selectively destroy tumor cells through recognition of TSNA.

Immune Evasion

While some patients do respond to checkpoint inhibitor therapy with the mobilization of T cells that recognize TSNA and kill tumor cells, such patients are in the minority (0-20% for most common solid tumors (Kiy et al., *Febs Letters* (2013)). Research into this clinical observation has shown that patients who respond to checkpoint inhibitors typically have, prior to therapy, inflamed tumors that contain infiltrating T cells (particularly cytotoxic CD8+ T cells) and that express markers of immune activation.

Figure 1. Response in Melanoma Patients Treated with Anti-PD-1 Antibody (Pembrolizumab) is Associated with Anti-Tumor T Cell Infiltration of the Tumor at Baseline*



* Adapted from Tumei et al., *Nature* (2014)

While the immune systems of these patients have recognized their tumors through the recognition of TSNA, the tumor-specific T cells have been shut down or inactivated in the tumor. Checkpoint inhibitors are capable of "re-activating" these T cells, but most patients fail to respond to checkpoint

inhibitor treatment because tumor-specific T cells are absent from the tumor due to tumor “evasion” of the patient’s immune response. We believe it is highly likely these patients have so-called “naïve” T cells in their bodies that have the ability to recognize the TSNA on tumor cells but that have not yet been activated. As a result, immune recognition, or the activation of the naïve T cells to the tumor antigen, and the generation of a large memory tumor-specific T cell response has not (yet) taken place.

Our Therapeutic Hypothesis

TSNA offer extremely attractive therapeutic targets for T cell-directed therapy because they are non-self and tumor-specific, and have been shown to function as the key T cell targets in humans responding to immune checkpoint inhibitor therapies. The fact that TSNA are non-self has several key implications:

- Every person’s existing, internal TCR repertoire of naïve T cells should be able to recognize TSNA presented by any tumor that arises within the body.
- A potent, focused T cell response against TSNA should be limited to an attack on the tumor, with minimal destruction of normal cells (off-tumor toxicity).
- TSNA are key targets for an effective human anti-tumor immune response, which means TSNA can be used therapeutically.

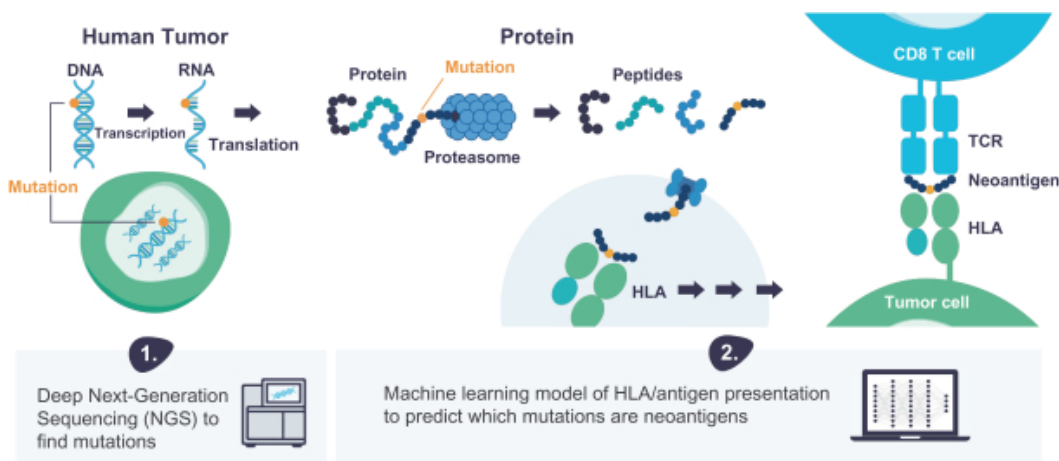
Our fundamental therapeutic hypothesis is that patients with common solid tumors often have TSNA, but the tumors have successfully evaded the patient’s immune system. Our goal is simple—to activate a potent TSNA-targeted T cell response using routine therapeutic interventions.

Our Gritstone EDGE Platform

Design of Our EDGE Platform

Neoantigens in tumors are created via a multi-step process starting with mutation in the cancer DNA, and leading to mutated peptides presented by the HLA on the surface of tumor cells. To select neoantigens for immunotherapy for cancer patients, we created our EDGE platform, which captures the essential elements of neoantigen biology via a combination of laboratory assays and computational analyses. The two steps of our EDGE platform prediction process are shown in Figure 2 below.

Figure 2. EDGE Platform



EDGE Step 1—Mutation Identification

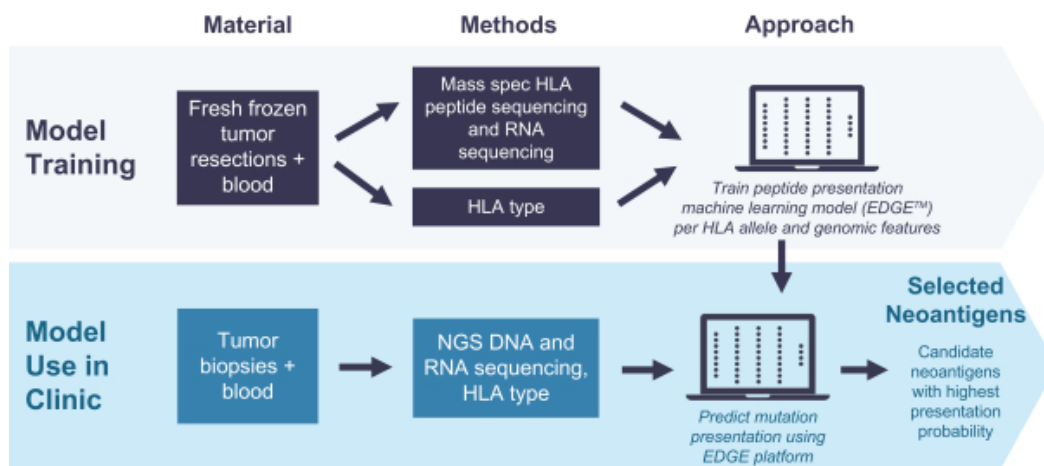
Identification of neoantigens requires accurate identification of tumor mutations and measurement of their expression levels in patient cancer specimens. To achieve this, we have built an in-house, cGMP-compliant, next-generation sequencing laboratory to perform deep sequencing of tumor DNA and RNA, as well as sequencing of the patient’s normal DNA. This first step in the EDGE process analyzes routine, core needle, formalin-fixed paraffin embedded tumor biopsies and identifies tens to hundreds of tumor mutated sequences.

EDGE Step 2—Neoantigen Prediction

Only a small fraction of tumor mutated sequences are expected to result in actual neoantigens presented on the surface of tumor cells. This fraction may be as low as approximately 1% of all mutations. To accurately predict which neoantigens will be presented on the surface of tumor cells, we have generated a large dataset of HLA/peptides from human tumor and matched normal tissue specimens. Our process isolates and sequences HLA/peptides, using an immunopeptidomic mass spectrometry approach. We also analyze tumors for level of RNA expression of all genes. Our dataset now comprises more than 300 resected tissue specimens, spanning lung, colon, ovarian and gastric cancers from patients of various ancestries to ensure broad coverage of diverse patient HLA types. Each tumor specimen yields thousands of HLA/peptides and the total dataset has now grown to over one million HLA-presented peptides.

We use a subset of these and selected published peptide datasets to train a machine-learning model for neoantigen prediction in our EDGE platform. The model learns the critical DNA/RNA sequence features and other factors like RNA expression that lead to a greater likelihood of peptide presentation by the HLA. Our EDGE model analyzes mutated peptides in turn and calculates the probability that the peptide will be presented by the patient’s HLA on the surface of the tumor cell, or HLA-presented peptides. We prioritize mutations with the highest probability of presentation for inclusion in that patient’s personalized immunotherapy. The EDGE model training and clinical application are illustrated in Figure 3 below.

Figure 3. EDGE Model Training and Application



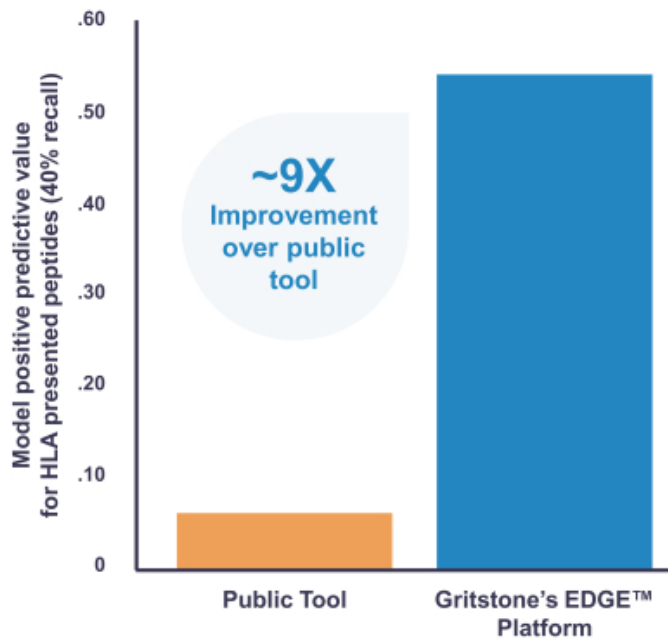
EDGE Neoantigen Prediction Performance

Accurate TSNA prediction is critical for our personalized immunotherapy, and we have evaluated the prediction performance of our EDGE model in two ways. First, we assessed the ability of the EDGE model to predict HLA presented peptides. We then tested whether the ability to predict HLA presented peptides translated into the ability to predict which mutations give rise to neoantigens with tumor-relevant T cell responses in patients.

Prediction of HLA-Presented Peptides

To assess EDGE model performance for prediction of HLA presented peptides, we used five tumor samples with HLA/peptides measured by mass-spectrometry that were not included in model training. For these test specimens, we predicted which peptides are likely to be presented on the tumor cell surface. We evaluated the quality of our predictions by calculating the positive predictive value, or PPV, which is the fraction of predicted peptides that were detected on the tumor HLA. As a benchmark, we compared performance of our prediction to that of publicly available tools (such as MHCflurry or NetMHC). Averaged over the test samples, our EDGE platform achieved a PPV of 54%, representing a nine-fold improvement over standard methods, as shown in Figure 4 below. We believe that TSNA selected by our EDGE platform have a much higher likelihood of being useful targets for immunization than those selected using industry standard methods.

Figure 4. Performance of EDGE Model for HLA/Peptide Prediction

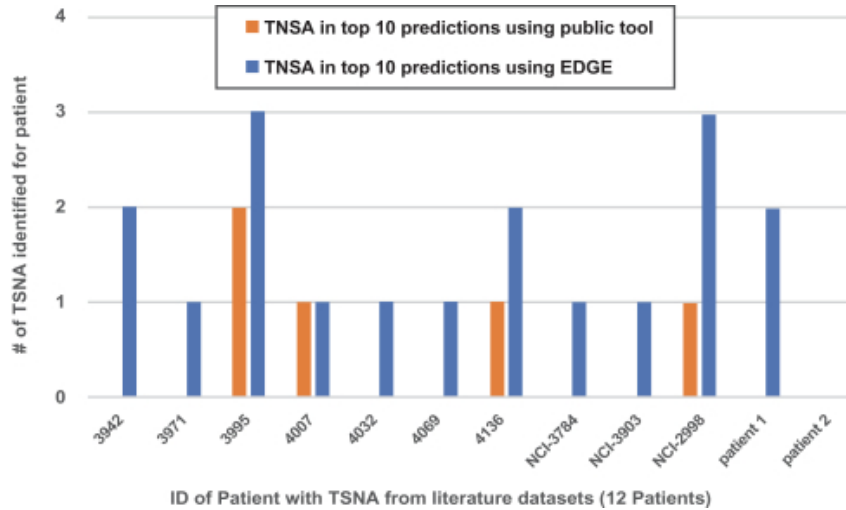


Prediction of TSNA with T Cell Responses in Patients

To show that our prediction of HLA/peptide presentation enables prediction of tumor-specific neoantigens that can be targeted by T cells in patients, we assembled a test set of independently validated, published neoantigens. The dataset comprised four separate studies in the literature, with over 2,000 mutations from 17 patients with melanoma, gastro-intestinal cancer and breast cancer, comprehensively analyzed for anti-tumor immune response using either tumor-infiltrating lymphocytes, or TILs, or activated T cells from the blood. In these studies, 12 of the 17 patients exhibited pre-existing T cell responses, with 26 neoantigens identified. Applying our EDGE model to select the top ten mutations for each patient from DNA/RNA sequence alone, we found that 11 out of the 12 patients with tumor-specific neoantigens had at least one neoantigen identified. In contrast, a standard approach identified true neoantigens for only four patients.

These results are illustrated in Figure 5 below.

Figure 5. EDGE Platform Identification of TSNA for Immunization in 12 Patients

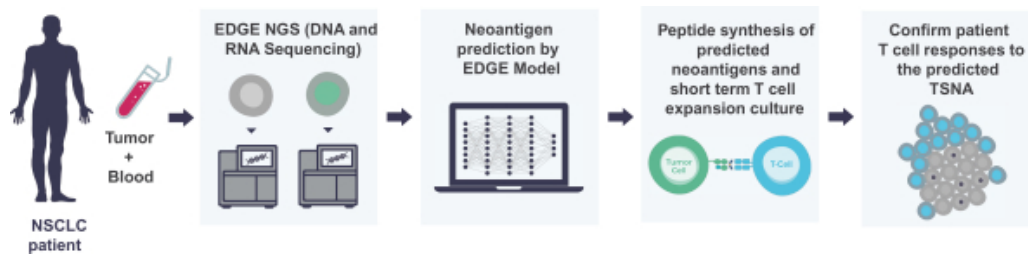


Applying our EDGE model to select the top twenty mutations for each patient, we found that a majority (19 of 26, 73%) of the tumor-specific neoantigens were included.

Ongoing EDGE Platform Validation

To further validate our EDGE platform's ability to identify TSNA in patients, we are also analyzing peripheral blood obtained from NSCLC patients receiving PD-(L)1 checkpoint inhibitors in an observational clinical study, wherein T cell recognition of predicted TSNA is assessed. This process is shown in Figure 6 below.

Figure 6. Gritstone Analysis of Neoantigen T Cell Responses in NSCLC Patients



Initial data from this study have shown that our EDGE platform identified TSNA-specific T cells in a majority (5 of 9, 56%) of NSCLC patients tested, with an average of two peptides recognized per patient in patients with detectable TSNA-specific T cells.

Genomic and immune response data from our clinical trials will serve to further validate and refine our EDGE platform.

Our Personalized Tumor-Specific Neoantigen Therapy

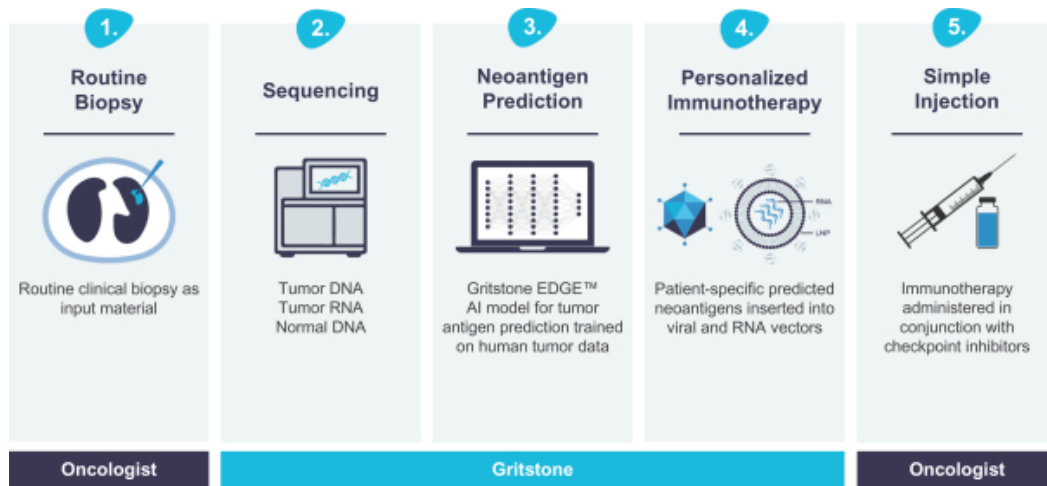
Overview

Our therapeutic hypothesis is that treatment with personalized TSNA-containing vectors combined with immune checkpoint inhibitor therapy will generate *de novo*, or augment existing, selective, TSNA-specific T cell response, unleashing the natural power of the immune system on tumor cells, potentially improving efficacy without a substantial increase in off-tumor toxicity. Our personalized immunotherapy candidate is designed to fit easily into a community oncology setting and to be administered in earlier lines of treatment rather than only in refractory or relapsed cancers. We have designed our personalized immunotherapy candidate such that oncologists will not have to alter their treatment practices, and we believe that this will extend the utility of our medicines into the community setting and not limit their use to scarce centers of excellence. We believe that as a result of its design, our personalized immunotherapy candidate has the potential to expand the efficacy of immunotherapy into broader patient populations.

Our Personalized Immunotherapy Process

Our personalized immunotherapy process leverages our proprietary EDGE platform to predict the TSNA that will be presented on a patient's tumor, allowing us to create a patient-specific heterologous prime-boost immunotherapy that is designed to elicit a potent anti-tumor T cell response. This process is outlined in Figure 7 below.

Figure 7. Gritstone's Personalized Immunotherapy Process



Step 1—Routine Biopsy

Most cancer care takes place in a community oncologist's office rather than an academic center, and we believe products should ideally be designed to be usable in these settings. We are designing and developing our product candidate for administration early in the cancer treatment paradigm, particularly where disease burden is low and a cure is perceived to be more likely. Such early care is also heavily weighted to the community oncologist setting. Consequently, our product development process necessarily begins with a routine biopsy to obtain a specimen of the tumor with a standard needle biopsy performed by an oncologist or radiologist.

Step 2—Sequencing

We then apply customized deep-sequencing and bioinformatic processes in-house to the patient's tumor biopsy specimen and blood to derive high-quality DNA and RNA sequence information and identify tens to hundreds of tumor mutations.

Step 3—Neoantigen Prediction

This tumor mutation sequence data is then entered into our proprietary EDGE platform. Our evolving artificial intelligence platform then predicts the TSNA most likely to be presented on the tumor cell surface.

Step 4—Personalized Immunotherapy

We assemble the predicted TSNA into a patient-specific "cassette." The cassette is incorporated into our heterologous prime-boost personalized immunotherapy, which is manufactured and filled into a vial.

Step 5—Simple Injection

The vial is then shipped to the oncologist’s office where it is delivered to the patient by simple intramuscular injection. Our personalized immunotherapy candidate is designed to be administered in combination with standard checkpoint inhibitors to drive large numbers of TSNA-specific T cells to the tumor site, where they remain active.

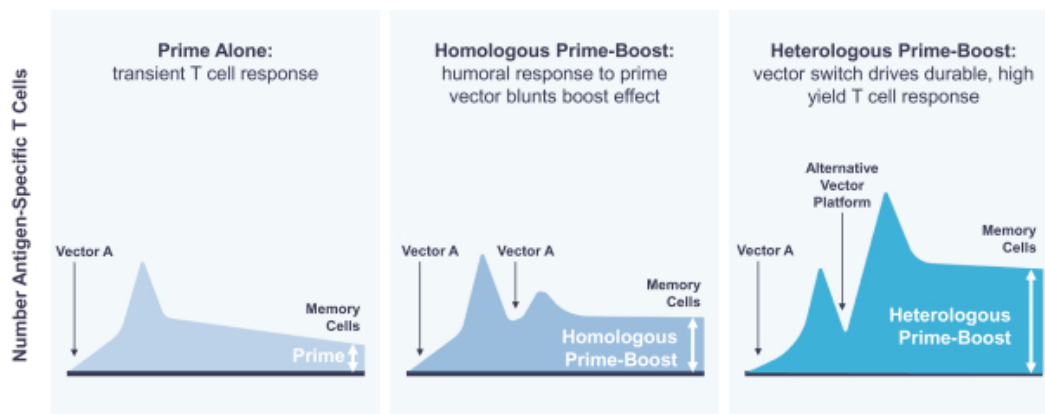
Our Lead Product Candidate (GRANITE-001)

Our therapeutic goal is to drive a large and sustained T cell response against all TSNA presented on a patient’s tumor. Cancer patients may have pre-existing memory T cells directed against some of the TSNA delivered within the neoantigen cassette in their personalized immunotherapy. Boosting such pre-activated TSNA-specific T cells requires less antigen-specific stimulation than priming naïve T cells that have not yet been activated against their respective neoantigen. Importantly, early clinical data in the field suggest that for the majority of TSNA within the immunotherapy cassette, priming naïve T cells will be required to mount a large immune response. Priming naïve T cells is a multi-step process that requires a potent antigen delivery platform able to deliver cassette neoantigens in a highly immunogenic manner.

Human infectious disease vaccine experience has taught us that delivering antigens within an adenoviral vector can prime a substantial T cell response consisting of cytotoxic CD8+ T cells and CD4+ T-helper cells. We believe an adenoviral vector is one of the most potent antigen-delivery platforms to prime naïve T cells. Peptide vaccination has not been able to accomplish this goal.

We believe that continued immune pressure upon the tumor is likely necessary to prevent immune escape by the tumor and drive a durable clinical response. To sustain high numbers of tumor-specific T cells, the same tumor-specific antigen can be given in a different vector from that used to prime, as a boost immunization. This heterologous prime-boost concept has been shown to activate and sustain high antigen-specific T cell responses, as shown in Figure 8 below.

Figure 8. Comparison of Heterologous Prime-Boost with Homologous Prime-Boost and Prime Alone



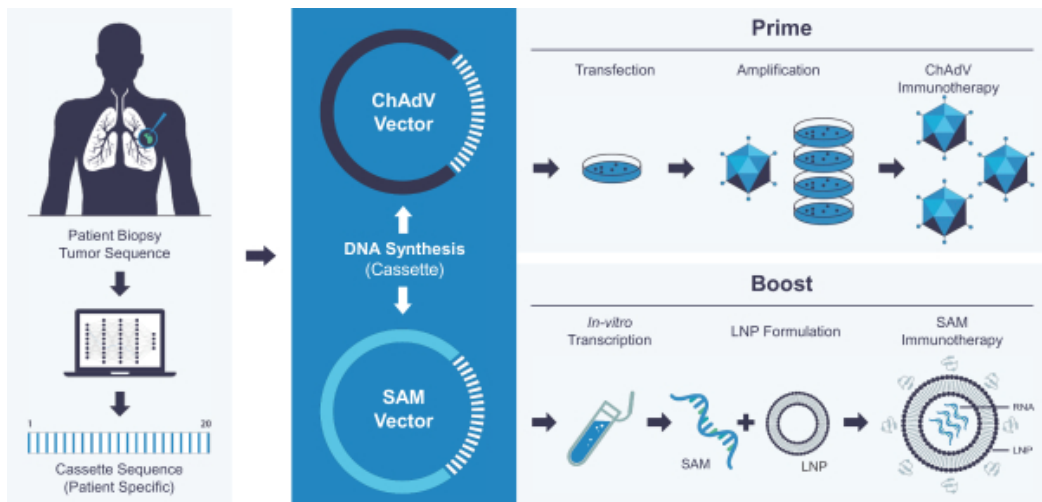
Our Construct

Our personalized immunotherapy candidate consists of (1) a prime vector and (2) a boost vector, both of which contain (3) the same personalized “cassette” containing the top-20 predicted patient-specific neoantigens:

1. **Prime Vector.** The prime vector is a chimpanzee adenovirus, or ChAdV. There is extensive clinical experience with the ChAdV vector platform in infectious disease studies over the last 20 years demonstrating that ChAdV vectors are well tolerated and consistently generate rapid and substantial CD4+ and CD8+ T cell responses that have been shown, in a Phase 2b randomized controlled trial, to protect humans against infections such as malaria.
2. **Boost Vector.** The boost is a self-amplifying mRNA, or SAM, formulated in a lipid nanoparticle, or LNP. A SAM vector comprises RNA that encodes the selected target antigens, such as TSNA, plus an RNA polymerase. After injection into muscle and uptake into host cells, the RNA is translated into protein, and the RNA polymerase starts to replicate the originally injected source RNA, amplifying the number of copies within the cells dramatically. This leads to production of large amounts of the delivered target antigens. During the RNA replication, RNA structures that are foreign to a normal cell are generated, which drives a strong danger signal to surrounding immune cells, triggering an early immune reaction (innate immune response). The presence of large quantities of antigen in an immune-stimulating environment drives profound antigen-specific T cell responses (adaptive immune responses). This approach is fundamentally distinct from using mRNA, which does not possess these attractive properties.
3. **Personalized Cassette.** Within each of the two vectors used for the prime and boost immunizations, we include a cassette that is the only personalized component of the process. This cassette contains the top-20 predicted patient-specific TSNA. The same neoantigen cassette is used for both prime and boost vectors for each patient. We have designed the cassette to contain 20 TSNA based on several considerations, including TSNA prediction performance, potential immune competition and manufacturing factors.

The prime and boost immunotherapy construction is depicted in Figure 9 below.

Figure 9. Prime and Boost Immunotherapy Construction



Our current manufacturing process includes Gritstone and qualified third-party contract manufacturing organization, or CMO, sites that are designed to operate under cGMP requirements. The manufacturing process starts when tumor samples are received by our sequencing lab in Cambridge, Massachusetts. Our EDGE platform is used to select 20 appropriate genetic sequences for neoantigen manufacturing, and a qualified CMO inserts these genetic sequence cassettes into standard plasmid backbones. The ChAdV vector, which encodes the genetic sequence in the cassette, is sent to our Pleasanton, California facility for manufacturing the prime immunotherapy, and the SAM vector, which encodes the genetic sequence in the cassette, is sent to a qualified CMO for manufacturing the boost immunotherapy. This end-to-end process, from biopsy receipt to shipment of the personalized heterologous prime-boost immunotherapy to the clinical site for patient administration, will initially take approximately 16-20 weeks. This period is consistent with the stated production and release times for other personalized immunotherapy approaches (mRNA or peptide) described in the literature and, importantly, acceptable for deployment in early treatment of cancer patients in the adjuvant setting where clinical urgency is lower as compared to the relapsed or refractory late stage setting in which adoptive T cell therapy may be utilized.

The ability to control the manufacturing of a high-quality personalized immunotherapy product, and scale production if early data are positive, is critical for efficient clinical development and commercialization. Our goal is to internalize the majority of the manufacturing steps to drive down both cost and production time, as well as establish full control over intellectual property and product quality. We have invested significant resources in our Cambridge, Massachusetts sequencing lab and our Pleasanton, California manufacturing facility to address these needs and to position us to control the critical steps in our personalized immunotherapy product production.

Our Preclinical Non-Human Primate Data

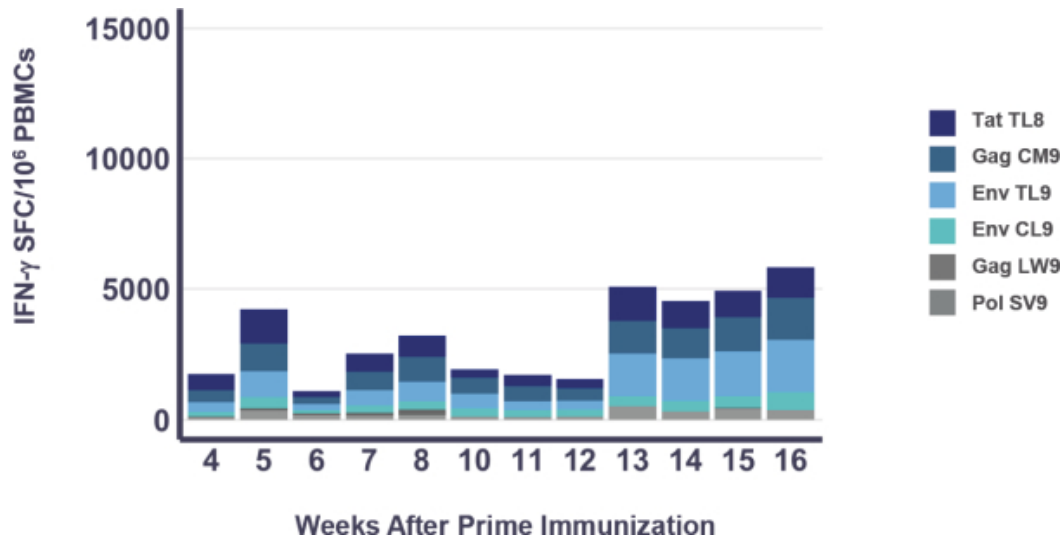
Our goal is to drive a large and sustained TSNA-specific T cell response to control tumor growth and/or eradicate the tumor. Published data from adoptive T cell therapies provide preliminary guidance on clinically efficacious T cell levels in patients. These studies suggest that T cell levels of approximately 10,000 antigen-specific T cells per milliliter of blood measured in patients four weeks post-infusion indicate clinical benefit.

We have focused our preclinical program on assessing the potency of our immunotherapy candidate in non-human primates, or NHPs, because published data suggests that NHPs' immune responses to our immunotherapy candidate will better predict human data than murine models due to the comparative similarities between NHP and human immune systems. Preclinical and clinical studies have shown that T cell responses induced in NHPs were predictive of responses in human clinical trials—the same relative potency was observed for different vaccinations in NHPs and humans. In these studies, a small 1.5- to three-fold decrease in absolute T cell response was measured when comparing NHPs to humans. By contrast, murine models, while simple, have been shown to be less likely to predict outcomes of cancer immunotherapy in humans, believed to be due to the many differences in immune system components between humans and mice.

We have completed one preclinical study and are currently conducting another preclinical study in NHPs to demonstrate the ability of our heterologous prime-boost immunotherapy approach to prime a potent immune response against the non-self model antigens delivered within the cassette. We constructed ChAdV and SAM vectors encoding viral, non-self model antigens because NHPs do not have tumors or TSNA. We collected blood samples, which include T cells, throughout the studies pre- and post-immunization to measure the kinetics and level of T cell responses specifically directed against the model antigens. T cells were isolated from the blood and the number of antigen-specific T cells are reported as spot forming cells, or SFCs, per 10^6 peripheral blood mononuclear cells, or PBMCs, which is a measure of the number of antigen-specific cytokine secreting cells (typically T cells) in an NHP. CD8+ T cells comprise one of the critical fractions of T cells quantified with this T cell assay.

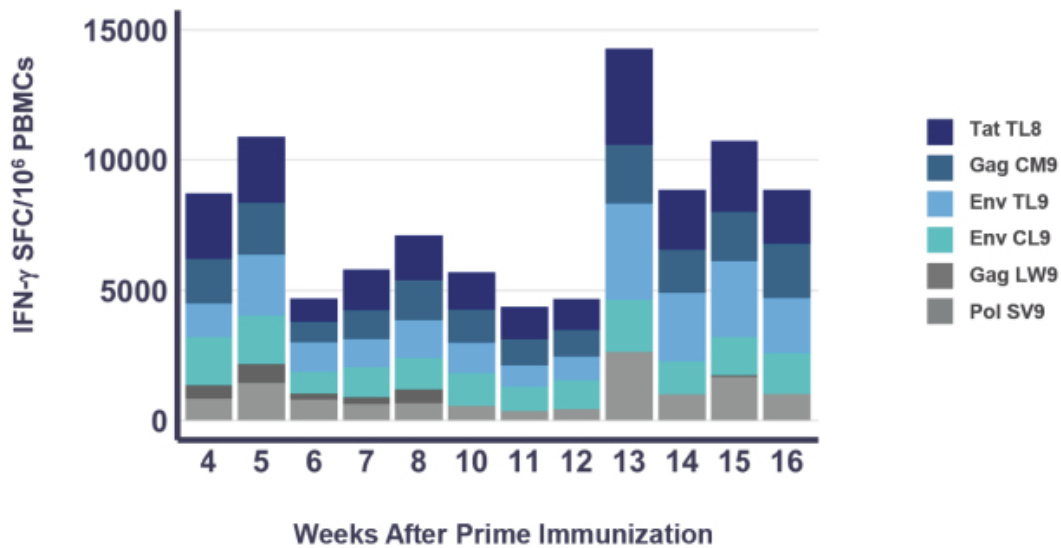
In our experiments, the NHPs immunized with ChAdV showed a rapid priming of T cell responses that peaked 14-21 days after immunization with combined immune responses to all six non-self model antigens of approximately 2,000 SFCs per 10⁶ PBMCs. These data are consistent with immune responses reported in the literature for adenoviral vectors. Administration of a SAM boost, four weeks after the ChAdV prime, increased T cell responses approximately two-fold, with combined immune responses to all six non-self model antigens of approximately 4,000 SFCs per 10⁶ PBMCs measured seven days after the SAM boost, as shown in Figure 10 below. These T cell responses increased further after a second SAM boost at week 12, to around 5,000 SFCs per 10⁶ PBMCs and were maintained at these levels for four weeks without further boosts. T cell responses to each individual antigen were broadly comparable in magnitude for four of the six antigens administered. We anticipate that this breadth of T cell response against multiple antigens delivered within the cassette will be essential for the control of tumors within a patient.

Figure 10. Immune Response in NHPs to Heterologous Prime-Boost Immunotherapy Without Co-Administration of Checkpoint Inhibitors



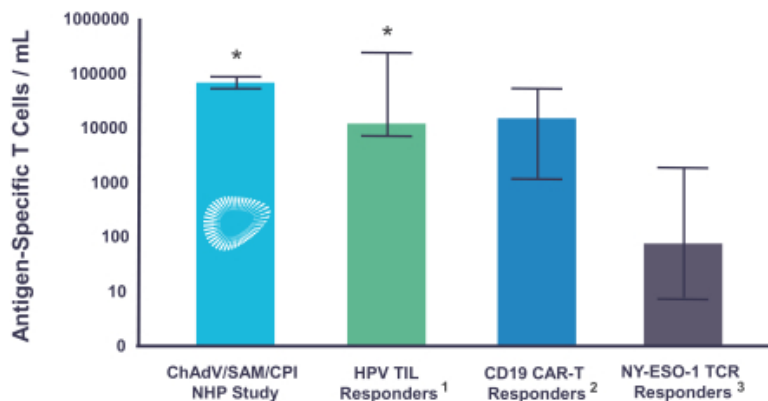
The literature suggests that the addition of immune checkpoint inhibitors increases T cell expansion when combined with a vaccine. To study this concept, we administered our immunization to NHPs in combination with the checkpoint inhibitor anti-CTLA-4. Co-administration of anti-CTLA-4 monoclonal antibodies, or mAb, with the ChAdV immunotherapy significantly increased ChAdV priming with a combined T cell response of approximately 7,500 SFCs per 10⁶ PBMCs observed four weeks after immunization, as shown in Figure 11 below. The SAM boost administered four weeks after the prime immunization with anti-CTLA-4, increased the antigen specific T cell response further, reaching T cell levels greater than 10,000 SFCs per 10⁶ PBMCs. A second SAM boost in combination with the anti-CTLA-4 antibody given eight weeks after the first boost immunization expanded the antigen-specific T cells further to peak levels reaching greater than 14,000 SFCs per 10⁶ PBMCs one week after the boost which were maintained at levels between 9,000-10,000 SFCs per 10⁶ SFC per 10⁶ PBMCs for several weeks. Thus, our heterologous prime-boost immunotherapy approach induced T cell numbers between 5,000-14,000 SFC per 10⁶ PBMCs that were sustained over 16 weeks.

Figure 11. Immune Response in NHPs to Heterologous Prime-Boost Immunotherapy in Combination with Checkpoint Inhibitor Anti-CTLA-4



In order to compare the number of robust antigen-specific T cells induced by our heterologous prime-boost approach in NHPs directly to the literature data from adoptive T cell therapies, we converted our units of SFCs per 10⁶ PBMCs to units of CD8+ T cells per milliliter of blood and plotted them against the T cell data from various clinical studies (which we also converted, where necessary, to T cells per milliliter of blood). One milliliter of blood is estimated to contain around three million PBMCs. The comparative data suggest that the antigen-specific CD8+ T cell numbers reached with our immunotherapy in NHPs (shown in the leftmost bar of Figure 12 below) is in the range of the T cell levels achieved in cancer patient clinical responders to adoptive T cell therapies (shown in the three rightmost bars in Figure 12 below), even when anticipating a 1.5- to three-fold decrease in the number of T cells induced in humans versus NHPs (as noted in the literature). Such substantial T cell numbers have not, to our knowledge, been reached with a therapeutic cancer vaccine in clinical studies to date. Furthermore, in addition to priming numerically substantial T cell responses against the cassette neoantigens, our immunotherapy regimen has been shown to induce T cells of high functional quality in NHPs, with a cytokine secretion profile seen in highly functional and cytotoxic T cells.

Figure 12. Comparison of Number of T Cells Induced by Our Immunotherapy in NHPs to Number of T Cells Observed in Clinical Responders to Adoptive T Cell Therapies



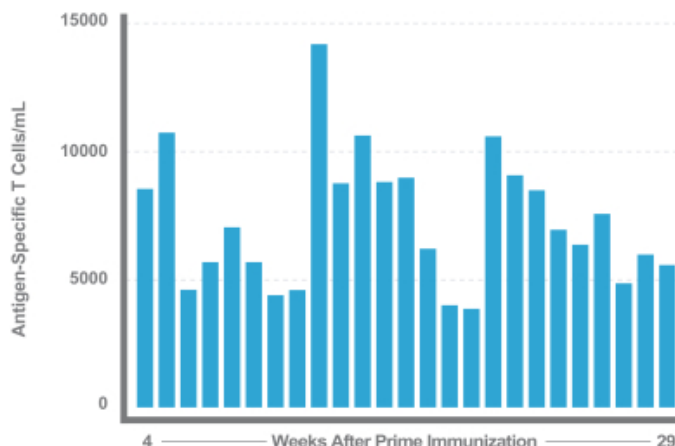
Estimated from ELISpot data
 Bars represent min. and max. values

Data derived from:

1. Stevanovic et al., J Clin Onc. (2015)
2. Lee et al., Lancet (2015)
3. Robbins et al., Clin Cancer Res. (2015)

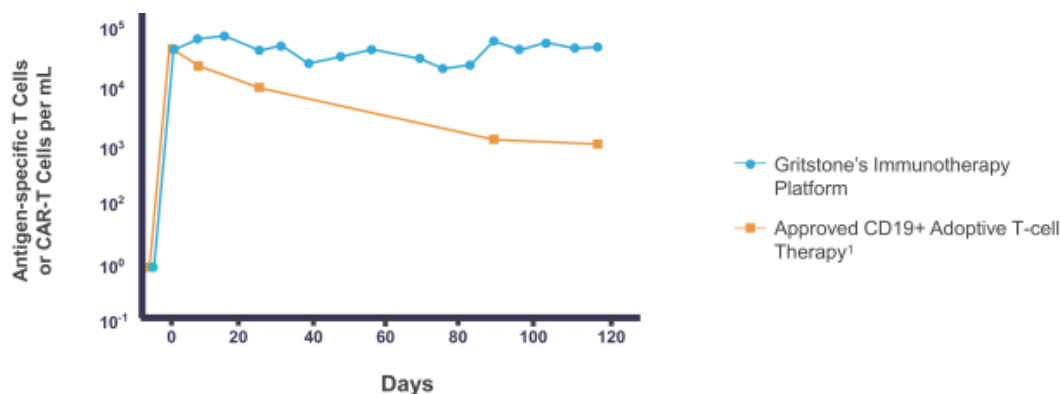
We believe that continued immune pressure upon the tumor is likely necessary to prevent immune escape by the tumor and consequently drive a durable clinical response. High T cell titers persisting for at least six months were induced by the heterologous prime-boost immunotherapy approach in combination with anti-CTLA-4, as shown in Figure 13 below.

Figure 13. Gritstone's Immunotherapy Platform ChAdV + SAM + anti-CTLA-4



To compare the durability of the T cell responses induced with our heterologous prime-boost immunotherapy approach in NHPs to the persistence of T cells post adoptive T cell therapy in humans, we plotted our T cell data over time against the data described in the literature of a recently approved CD19-specific adoptive T cell therapy. The data in Figure 14 below show that T cell numbers induced in NHPs with our heterologous prime-boost immunotherapy were more durable over a period of four months than T cell numbers observed over the same period in humans who responded to adoptive T cell therapy.

Figure 14. Comparison of Duration of T Cells Observed in NHPs with Gritstone's Immunotherapy Platform to An Approved CD19 Adoptive T Cell Therapy



*GRANITE-001 + anti-CTLA-4 in non-human primates

¹Neelapu, *NEJM* (2017)

Safety

We have performed a ten-week GLP toxicity evaluation of the ChAdV and the SAM prime-boost in NHPs to assess safety. The heterologous prime-boost immunotherapy, when administered intramuscularly, was well tolerated at the clinical maximal dose of each therapy.

Our Clinical Development Strategy

We are employing an innovative and flexible clinical study design in an effort to execute a potentially faster-to-market strategy in a rapidly evolving and competitive treatment landscape. In order to accelerate the execution of our Phase 1 and Phase 2 program, we intend to use a seamless Phase 1/2 trial design. A seamless design refers to an integrated Phase 1 and Phase 2 trial protocol that allows rapid transition following dosing and tolerability confirmation during the Phase 1 portion to establishing proof-of-concept in the Phase 2 cohort expansion portion without compromising patients' safety or incurring delay for analysis or approval. Data obtained from this Phase 1/2 trial will inform the design and initiation of Phase 2/3 studies with registrational intent in the metastatic and adjuvant settings in specific tumor types, for both GRANITE-001, our personalized tumor-specific immunotherapy product candidate, and SLATE-001, our shared tumor-specific immunotherapy product candidate. Advanced NSCLC and gastroesophageal, bladder and MSS colorectal cancers are the initial indications for the Phase 1 portion of our GRANITE-001 initial trial. These indications have been selected for several reasons, including high mutational load, response to checkpoint inhibitors, large patient populations, manufacturing time, emerging treatment landscape, regulatory pathway, the ability to combine personalized immunotherapies with immune checkpoint inhibitors and the opportunity to generate *de novo* immune responses and/or amplify existing anti-tumor T cell responses in order to improve the depth and durability of clinical responses.

Our Planned Phase 1/2 Trial (GO-004)

In August 2018, we submitted our IND for our lead product candidate, GRANITE-001, to the FDA. In the second half of 2018, we intend to initiate our first-in-human, Phase 1/2 trial, which we refer to as GO-004, with investigation of intramuscular heterologous prime-boost immunization with ChAdV and SAM in combination with mAb to PD-1 and CTLA-4. Our Phase 1/2 trial will enroll newly diagnosed, advanced lung, gastric and bladder cancer patients who are receiving first-line chemotherapy treatment. Production of the immunotherapy will take place while patients are receiving their initial chemotherapy, and we will administer our experimental, personalized immunotherapy candidate in combination with checkpoint inhibitors as either maintenance therapy or second-line therapy. We will also include relapsed colorectal cancer patients with MSS tumors whose responses to current immunotherapies are trivial (Le et al., *NEJM* (2015)) and who have been predicted to have adequate TSNA to merit inclusion in our program. We will exclude patients who have large neoantigen loads and are well served by currently approved immunotherapy, such as melanoma patients and those with colorectal cancer and microsatellite instability. The Phase 1 portion of our seamless Phase 1/2 trial will seek to establish a dose for further investigation in Phase 2 and to evaluate safety, tolerability and, importantly, immunogenicity of our lead product candidate. Efficacy signals may not be observed nor be interpretable during the Phase 1 portion. Thus, we will seek to further evaluate efficacy and safety in the Phase 2 cohort expansion portion in several common solid tumor types.

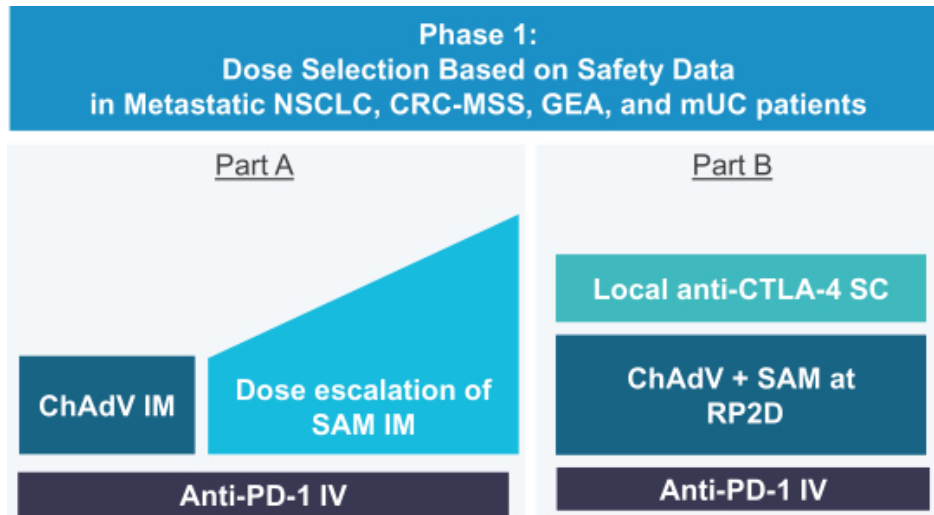
We believe co-administration of checkpoint inhibitors with personalized immunotherapy is a rational way to augment the T cell response and potential efficacy of the therapeutic regimen. Use of mAb to PD-1 is believed to unleash T cells which have been functionally silenced in tumor tissue by local PD-1 expression. Administration of antagonistic mAb to CTLA-4, an early inhibitory marker of T cell activation, has been shown to broaden the T cell response. Local subcutaneous administration of anti-CTLA-4 provides high drug concentration in the vaccination site-draining lymph node while

minimizing systemic exposure, which we believe will optimize the benefit-risk ratio of our experimental regimen. We will be provided with checkpoint inhibitors by our collaborator, BMS.

The Phase 1 portion of GO-004 will consist of two parts. All patients will receive anti-PD-1 intravenously. Part A of the Phase 1 portion of GO-004 will first examine the safety, tolerability, dose, immunogenicity and early efficacy of the initial administration of ChAdV as a prime succeeded by multiple dose levels of SAM boosts (heterologous prime-boost); Part B will consist of the co-administration of subcutaneous anti-CTLA-4 with ChAdV prime and SAM boosts at the dose established at the end of Part A. Depending upon accrual rate and safety signals, we expect to receive preliminary efficacy data by the end of 2019.

Figure 15 below illustrates the Phase 1 portion of our Phase 1/2 trial design (GO-004).

Figure 15. Phase 1 Portion of Phase 1/2 Design (GO-004)



CRC-MSS, microsatellite stable colorectal cancer; NSCLC, non-small cell lung cancer; mUC, metastatic urothelial cancer; GEA, gastroesophageal adenocarcinoma; ChAdV, Chimpanzee Adenovirus; SAM, self-amplifying mRNA; IM, intramuscular; IV, intravenous; SC, subcutaneous; RP2D, recommended phase 2 dose

Upon completion of the Phase 1 portion of GO-004, we will aim to demonstrate proof-of-concept in the Phase 2 portion where we will administer the heterologous prime-boost regimen in combination with intravenous anti-PD-1 mAb and subcutaneous anti-CTLA-4 at the recommended Phase 2 dose established during Phase 1. The Phase 2 portion of GO-004 will consist of single-arm expansion cohorts in "cold" tumors where checkpoint inhibitors alone have very low efficacy (such as MSS colorectal cancer), and potentially randomized cohorts in typically more inflamed tumors (such as lung, gastric or bladder cancer), where checkpoint inhibitors are known to have some activity. We will also assess the efficacy of a SAM homologous prime-boost immunotherapy regimen in different tumor types.

We hypothesize that personalized immunotherapy should ideally be administered in earlier lines of treatment, in the context of minimal residual disease and an optimal immune system. Depending on

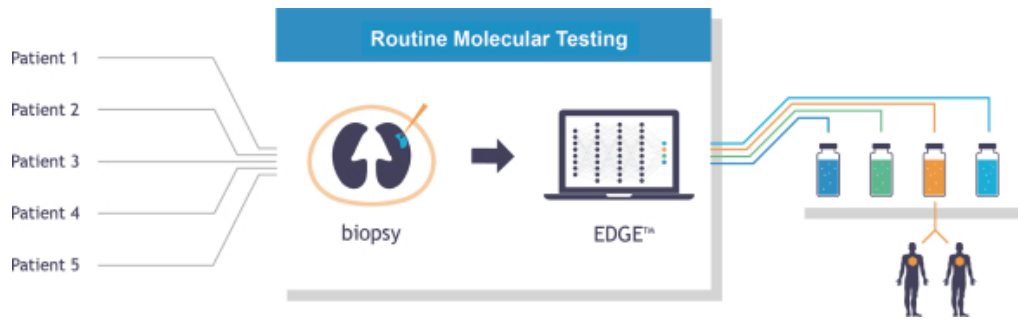
the safety profile observed during the Phase 1 portion of GO-004 and in parallel to single-arm cohort expansions in the Phase 2 portion of GO-004, we are considering options to conduct randomized Phase 2 trials in stage III unresectable tumors, such as lung cancer, where our personalized immunotherapy would be used as consolidation following first-line chemo-radiotherapy. Likewise, in patients with tumors at very high risk of relapse following complete surgical resection, such as patients with triple-negative breast cancer, colorectal cancer, squamous cell carcinoma of the head and neck, or ovarian cancer, we may use our personalized immunotherapy candidate in the adjuvant setting to prevent recurrence of their disease. In this particularly challenging setting, we plan to use cell-free (circulating) DNA, or cfDNA, to detect the presence of remaining tumor cells following surgery and during adjuvant immunotherapy. We believe cfDNA technology will soon be accepted by investigators and health authorities as a validated surrogate endpoint of efficacy alongside well-established clinical endpoints, such as metastasis-free survival, progression-free survival and overall survival.

Throughout our clinical development, we will closely monitor the generation of T cells both in the blood and infiltrating the tumor microenvironment, and determine differences in the mutational and neoantigen profile of cfDNA from a patient at multiple time points during chemotherapy and immunotherapy along with additional blood- and tumor-based biomarkers including, but not limited to, serum cytokines and circulating immune cells, gene expression profiling for immune-related and tumor-related proteins, immune cell infiltration and composition and sequencing of the TCR on TILs.

Off-The-Shelf Neoantigen-Directed Immunotherapy Product (SLATE)

Our personalized immunotherapy product, GRANITE-001, is an attractive approach to neoantigen-directed immunotherapy for the largest possible number of cancer patients. A key question in the field is whether there are neoantigens which are shared by multiple patients and may thus be used to design an off-the-shelf neoantigen-directed product for a particular subset of patients with these shared neoantigens. Using our EDGE platform, we are identifying certain neoantigens arising from genes which are recurrently mutated in cancer because their function can be altered in a cancer-promoting manner. Such mutations are termed driver mutations, and they are well characterized given their importance as functional drug targets. Examples include activating mutations in KRAS or EGFR genes which drive cell proliferation and/or growth, and inactivating mutations in genes such as TP53 and APC which normally limit DNA damage or cell proliferation, respectively. As noted above, the existence of a neoantigen is determined by the combination of a mutated peptide and the presenting HLA molecule. It has been demonstrated that a common KRAS mutation (G12D), often found in colorectal cancer, could be processed by tumor cells and presented as a functional neoantigen by tumor cells carrying the HLA-C*08:02 protein. This combination of KRAS mutation and HLA is estimated to be found in 1-2% of colorectal cancer patients. KRAS mutations are also common in lung and pancreatic cancers.

Building on this observation, we have applied our EDGE antigen prediction model to common tumor driver mutations and predicted a large set of candidate shared neoantigens. Early analyses suggest that while each such shared neoantigen may only be found in less than 2% of patients with a particular tumor type, our heterologous prime-boost can deliver at least 20 of these TSNA, which we believe will result in the off-the-shelf product having an addressable population of approximately 10-15% of patients within common solid tumor types such as colorectal cancer and lung cancer. Our off-the-shelf product candidates, the first of which in development is SLATE-001, are expected to be specific to a particular tumor type, and the TSNA cassette is fixed for each product. The process for determining which patients are eligible for SLATE therapy is illustrated below in Figure 16.

Figure 16. Gritstone's Off-the-Shelf Immunotherapy Platform, SLATE-001

While our off-the-shelf SLATE product candidate series utilizes the same heterologous prime-boost system as GRANITE-001, the viral prime and RNA boost contains a fixed TSNA cassette that is designed for the subset of patients who carry the relevant antigens and HLA types. Given the commonality between GRANITE-001 and our SLATE product candidate series, we expect that there will be no additional pre-clinical work required for a particular SLATE product candidate to enter clinical testing following the Phase 1 portion of GRANITE-001's Phase 1/2 clinical trial. We also expect to investigate clinical combinations of SLATE product candidates with immune checkpoint inhibitors and are expecting to file an IND in mid-2019 and, if accepted, to enter human clinical trials for SLATE-001 in the second half of 2019. Depending upon accrual rate and safety signals, we expect to receive preliminary efficacy data by the end of 2020. Based on the importance of KRAS as a shared neoantigen, we are currently evaluating the potential utility of SLATE-001 in patients with advanced colorectal (microsatellite stable) cancer, lung adenocarcinoma and pancreatic ductal adenocarcinoma. Our preliminary estimates of the addressable patient population in these diseases range from 10 to 15%.

The driver of appropriate utilization of the off-the-shelf-product candidate is the ability to accurately identify patients whose tumors contain one of the TSNA represented within the off-the-shelf product. The widespread use of tumor mutation panel sequencing in advanced cancer has enabled the identification of such patients, and complementary assessment of a patient's HLA type is a standard clinical test, performed off a routine blood draw, and completed within 7-10 days by a clinical immunology laboratory.

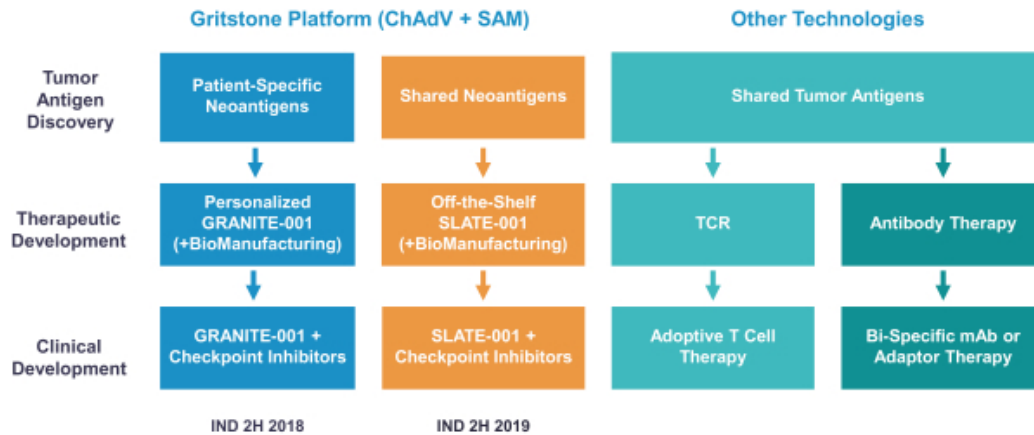
We expect that the manufacturing of the SLATE product candidate series will be carried out using our current supply chain. The off-the-shelf nature of the product candidates allows us to leverage our processes developed for personalized products.

Our EDGE Antigen Identification Engine—Beyond Tumor-Specific Neoantigens

Our EDGE antigen discovery platform has also identified novel, functionally tumor-specific antigens which, as opposed to most TSNA, are commonly shared between patients. A leading set of shared tumor antigens derives from cancer testis antigens, or CTA, genes that are non-mutated and normally only expressed in the testis, but which can also be expressed by some tumor tissue. The testis is an immune privileged site such that it is able to express antigens without eliciting an immune response. CTA are well established in the literature and our approach has identified many genes, and antigens from within those genes, that may represent novel shared-tumor antigens. Currently, tumor-specific CTA targets are limited; known HLA/peptide CTA are present in only a fraction of patients within any given tumor type, with some tumor types exhibiting essentially no HLA/peptide targets available in the public domain. We believe our EDGE platform has the potential to unlock these tumor types for therapeutic development by providing novel cancer immunotherapy targets that may be exploited via several therapeutic modalities.

We are developing TCRs and antibodies that specifically recognize these novel shared tumor-specific antigens and their corresponding HLA surface proteins. These targets can be addressed therapeutically using several different formats, such as adoptive T cell therapy, bispecific antibody approaches and vaccination. These programs are in early development. Our TSNA and shared tumor antigen discovery programs are shown in Figure 17 below.

Figure 17. Our TSNA and Shared Tumor Antigen Discovery Programs



TCR-Mimetic Antibodies

While TCRs are the natural biological recognition elements on T cells for a particular HLA/peptide complex, it is possible to identify antibodies that bind with high affinity and high selectivity to a particular HLA/peptide complex. These have been termed TCR-mimetic antibodies. We have commenced working with a third-party contract research organization, or CRO, to identify TCR-mimetic antibodies against several of our novel CTA HLA/peptide complexes. These antibodies have two potential applications:

- *Bispecific T cell engaging antibodies.* A class of antibody therapeutics has been developed which modifies the typical two-armed antibody structure wherein both arms recognize the same target antigen. The modification employs different antigen specificities within the two arms—one arm recognizes a tumor antigen and the other recognizes and activates immune-effector cells such as T cells. The product concept we are developing is to use an anti-CTA TCR-mimetic single chain antibody fragment, or scFv, as the tumor-binding domain of a bispecific T cell engaging antibody, thus generating a suite of bispecific antibodies capable of engaging novel targets. We may partner with a company that has developed a bispecific antibody framework to develop a therapeutic for clinical trial testing.
- *Surface receptors for CAR-T cells.* Chimeric antigen receptor T cells, or CAR-T cells, have demonstrated clinical benefit when targeting the highly expressed B cell surface markers such as CD19. The chimeric antigen receptor in these approaches comprises an scFv which recognizes the target antigen (such as CD19). Replacing the anti-B cell scFv with an anti-CTA TCR-mimetic scFv can, in principle, create a CAR-T cell which recognizes tumor cells expressing the relevant CTA-derived HLA/peptide complex. We currently plan to partner such products with established cell therapy companies.

T Cell Receptors

TCRs recognize HLA/peptides, and once we have identified CTA-derived peptides plus their HLA binding partner as tumor-specific antigens, we can proceed to the identification of matched TCRs. This

is performed using healthy HLA-matched donors as a source of diverse T cells and screening these T cells against the target HLA/peptides. T cells that activate and expand in response to a target HLA/peptide will express relevant TCRs, and these can be characterized by isolation of the relevant T cells and sequencing of their TCR genes. These natural TCRs may offer advantages over alternative TCR identification approaches. We possess the internal expertise to identify HLA/peptide specific TCRs from HLA-matched donor blood, and we may partner those TCRs with established adoptive T cell therapy companies.

Strategic Collaboration with bluebird bio

In August 2018, we entered into a research collaboration and license agreement with bluebird bio to utilize our EDGE platform to identify and validate tumor-specific targets and provide TCRs directed to ten selected targets for use in bluebird's cell therapy platform. Under the collaboration, we received a non-refundable up-front cash payment of \$20.0 million and an additional \$10.0 million in equity investment in our Series C convertible preferred stock. We are also eligible to receive up to an aggregate of \$1.2 billion in development, regulatory and commercial milestones associated with bluebird bio's resulting cell therapy products, as well as tiered, single-digit royalties on sales of the TCR immunotherapy products that utilize the TCRs discovered by us. bluebird will be solely responsible for all costs and expenses of its development, manufacturing, and commercial activities for resulting therapies.

The identification, validation, selection and development of the TCRs will be conducted during a five-year research term and may be extended by an additional year under certain conditions. The collaboration will be governed by a joint steering committee with representatives from us and bluebird. We and bluebird have exchanged non-exclusive licenses to carry out the research program, and, on a selected target-by-selected target basis, we have granted bluebird an exclusive worldwide license to research, develop, and commercialize resulting cell therapy products directed to such targets, including rights to utilize TCRs discovered by us. The collaboration term ends on a country-by-country and product candidate-by-product candidate basis based on completion of all payments owed to us by bluebird thereon. Either party may terminate the agreement upon written notice to the other party in the event of the other party's uncured material breach, subject to a dispute resolution process. In addition, bluebird may terminate the agreement for convenience upon prior written notice to us.

Manufacturing and Process Development

Manufacturing is a vital component of our personalized immunotherapy, and we are devoting significant resources to manufacturing and process development in order to optimize the safety and efficacy of our product candidates, as well as to reduce our per-unit manufacturing costs and time to market. The production of our personalized immunotherapy requires two distinct elements for each patient: tumor biopsy analysis to determine candidate neoantigens, followed by manufacture of vectors containing a personalized cassette encoding the selected neoantigens. The manufacture of these vectors involves complex processes, including per-patient plasmid production, mammalian cell production of virus and RNA synthesis and lipid encapsulation.

Our near-term goal is to carefully manage our fixed-cost structure, maximize optionality, and drive long-term cost of goods as low as possible. We currently use a hybrid approach to manufacturing our personalized immunotherapy whereby certain elements of our product candidates are manufactured on an out-sourced basis at CMOs, and other elements of our product candidates are manufactured internally at the 42,600 square foot manufacturing facility we established in 2017 in Pleasanton, California, all designed in compliance with cGMP. Our manufacturing strategy is designed to meet the demand needs of clinical supply and commercial launch, and we believe this hybrid approach will position us to support multi-center clinical trials and commercialization in the most time-efficient manner. In addition, the initial strategy of use of both CMOs and our own facility will provide capacity flexibility to meet potential changes in demand.

To date, we have leveraged our relationships with CMOs for preclinical studies and Phase 1/2 clinical trial supply. Doing so has significantly accelerated our ability to advance clinical trials, gain insights into the multiple manufacturing processes and establish an infrastructure for future trials. We believe our use of CMOs will also increase the speed with which capacity can be brought online, as well as enable technology transfer of processes from the CMOs into our in-house facility.

Our manufacturing process begins with receipt of a patient's routine biopsy and blood sample at our Cambridge, Massachusetts facility, where TSNA identification is performed using the EDGE platform. The TSNA sequences generated by our platform are sent electronically to a synthetic biology CMO to generate the patient-specific TSNA cassette, which is then cloned into each of the ChAdV and SAM vectors, and amplified. Following amplification, the ChAdV vector containing the cassette is sent to our Pleasanton, California facility for ChAdV manufacture and production into vials. In parallel, the SAM vector is sent to another CMO for RNA manufacture and then to a final CMO for formulation into LNP and production into vials. Currently, the entire manufacturing process, from biopsy receipt at Gritstone to the release and shipment of the personalized immunotherapy candidate to the clinical site for patient administration, takes approximately 16-20 weeks. This is consistent with the stated production and release times for other personalized immunotherapy approaches (mRNA or peptide) described in the literature. We expect this production and release timeline (and associated cost) will diminish over time due to process scaling, potential improvements in production and testing technologies and internal process expertise as well as potential reductions in regulatory testing requirements based on clinical experience.

To achieve this, our process development group is focused on several key initiatives. The first is investigating novel approaches to manufacturing our products, including process optimization and quality by design of each intermediate, drug substance and drug product. Additionally, we are systematically characterizing our manufacturing processes, including product intermediates and manufacturing unit operations. This characterization effort will allow us to implement process changes over the entire product lifecycle and to quickly react to evolving process technologies that can lead to reductions in per-unit manufacturing costs and shorter process cycle times. In addition, we plan to establish automated, closed-platform manufacturing processes. Such processes should give us the ability to conduct manufacturing in a non-classified, lower cost manufacturing environment for multiple steps of our drug product manufacturing.

Our longer-term goal is to internalize the majority of the manufacturing steps to drive down both cost and production time, as well as establish full control over intellectual property and product quality. We believe that operating our own manufacturing facility will provide us with enhanced control of material supply for both clinical trials and the commercial market, will enable the more rapid implementation of process changes, and will allow for better long-term margins. We continue efforts toward the phased integration of all manufacturing into our Pleasanton, California biomanufacturing facility. The ChAdV prime production is already fully integrated into the Pleasanton facility and we have initiated efforts toward integrating the SAM boost production in-house.

Our manufacturing strategy is currently structured to support our U.S., E.U. and Australian development plans. We believe this manufacturing strategy developed for global distribution will enable use in other geographies. Specific supply strategies for other geographies will be developed as part of our clinical and commercial plans for such other geographies.

License Agreement with Arbutus Biopharma Corporation

On October 16, 2017, we executed a license agreement with Arbutus Biopharma Corporation, or Arbutus. Arbutus is a leader in LNP technology with a broad intellectual property estate and a large library of LNPs, including multiple LNPs being used in clinical development by its partners, as well as the chemistry expertise to synthesize novel LNPs with properties optimal for SAM.

Under the agreement, Arbutus grants us a worldwide, exclusive (even as to Arbutus, subject to certain limited exceptions), sublicensable, transferable license, to research, develop, manufacture, and commercialize our novel RNA-based platform for intracellular delivery of SAM encoding TSNA in combination with one or more of Arbutus' proprietary LNPs. The licensed technology includes Arbutus' portfolio of proprietary and clinically validated LNP products and associated intellectual property, and includes technology transfer of Arbutus' manufacturing know-how.

As part of our collaboration, we have identified an LNP formulation that we believe will be optimal for use in our Phase 1/2 clinical trial of GRANITE-001. This LNP formulation is currently being used by third parties in human clinical trials in the United States. We have also initiated an effort to screen Arbutus' library of LNPs and evaluate novel LNPs to potentially identify an LNP that increases the potency of our SAM platform further. Our goal is to deliver a second generation SAM immunotherapy that has the potential to serve as a homologous prime-boost immunotherapy.

Under the license agreement, we paid Arbutus an upfront payment of \$5.0 million. We have also agreed to make aggregate payments of up to \$73.5 million upon the achievement of specified development milestones for up to three products, and an aggregate \$50.0 million in commercial milestone payments, as well as royalty payments in the low single-digits on net sales of licensed products for a royalty term lasting until the expiration of the last patent covered under the license. The last-to-expire patent is currently scheduled to expire on November 10, 2030. Pending applications will nominally expire 20 years after the filing date of the first utility application to which they claim priority. In the near term, upon acceptance of our first IND, we will be obligated to pay the first milestone payment of \$2.5 million to Arbutus, with further milestone payments not expected to occur before 2021. In addition, we will reimburse Arbutus for conducting technology development and providing manufacturing and regulatory support for our product candidates.

The Arbutus license continues in effect until the last to expire royalty payment or early termination. The license is terminable by us for convenience with 60 days prior written notice, upon payment of a no-cause termination sum. We may also terminate in the event of material adverse safety data for a product, failure to achieve a primary or secondary efficacy endpoint, or if a regulatory authority takes action that prevents us from commercializing any product. Either party may terminate the agreement for material breach, and Arbutus may terminate the agreement for abandonment or if we challenge Arbutus patents.

Competition

The biotechnology and pharmaceutical industries put significant emphasis and resources into the development of novel and proprietary therapies for cancer treatment. We face substantial competition from many different sources, including large and specialty pharmaceutical and biotechnology companies, academic research institutions and governmental agencies and public and private research institutions. We anticipate that we will continue to face increasing competition in the field of cancer therapy as new therapies, technologies, and data emerge from the field.

In addition to the current standard of care for patients, commercial and academic clinical trials are being pursued by a number of parties in the field of immunotherapy. Results from these trials have fueled continued interest in immunotherapy and our competitors include:

- In the neoantigen space, Agenus Inc., Neon Therapeutics Inc., or Neon, BioNTech AG in collaboration with Genentech Inc., Moderna Therapeutics, Inc. in collaboration with Merck & Co. Inc., Aduro Biotech, Inc., Advaxis Immunotherapies, Achilles Therapeutics, NousCom AG, ISA Pharmaceuticals BV, CureVac AG in collaboration with Eli Lilly and Company, Genocea Biosciences Inc., Vaccibody AS and PACT Pharma, Inc., or PACT.

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- In the bispecific antibody space, Roche, MacroGenics, Inc., Xencor Inc., Adimab LLC, Zymeworks Inc., F-Star Biotechnology Ltd., Novimmune SA, Genmab A/S, Five Prime Therapeutics, Inc., Merus N.V. and Immatics Biotechnologies GmbH.
- In the engineered cell therapy and TCR space, Novartis, Juno Therapeutics (acquired by Celgene Corporation), Kite Pharma (acquired by Gilead Sciences, Inc.), bluebird bio, Inc., Medigene AG, Adaptimmune Therapeutics plc, Amgen Inc., Atara Biotherapeutics, Inc., Autolus Limited, Cellectis S.A., PACT, Neon, Mustang Bio, Inc., Iovance Biotherapeutics, Inc., TCR² Therapeutics Inc., Editas Medicine, Inc., Unum Therapeutics Inc., Intrexon Corporation, CRISPR Therapeutics AG and Bellicum Pharmaceuticals, Inc.

Many of our competitors, either alone or with their strategic partners, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, and marketing approved products than we do. Mergers and acquisitions in the pharmaceutical, biotechnology and gene therapy industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we may develop. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. The key competitive factors affecting the success of all of our programs are likely to be their efficacy, safety, cost and convenience.

Intellectual Property

Our commercial success depends in part on our ability to obtain and maintain proprietary protection for our products and services, to operate without infringing the proprietary rights of others, and to prevent others from infringing our proprietary rights. We rely on a combination of patents and trade secrets, as well as contractual protections, to establish and protect our intellectual property rights. We seek to protect our proprietary position by, among other things, filing patent applications in the United States and internationally. Our patent estate includes patent applications with claims relating to our products, methods, and manufacturing processes, and broader claims for potential future products and developments. As of July 31, 2018, our solely-owned patent portfolio includes, on a worldwide basis, 46 pending patent applications relating to our products, methods, and manufacturing processes, including approximately 21 pending patent applications in the United States and approximately 25 pending patent applications filed internationally, and we have received a notice of issuance for a U.S. patent application relating to the use of a predictive model to identify neoantigens, particularly where the predictive model was trained using mass spectrometry data.

Our solely-owned patent estate includes a portfolio of pending patent applications related to our neoantigen-based platform; and a portfolio of pending patent applications related to our shared antigen-based platform. Details regarding these portfolios are provided below.

As of July 31, 2018, our solely-owned patent portfolio related to our neoantigen-based platform includes greater than 11 pending U.S. patent applications and greater than 21 ex-U.S. patent applications pending in countries including Taiwan, Australia, Brazil, Canada, Israel, Japan, Mexico, Malaysia, New Zealand, Peru, Philippines, Singapore, China, Colombia, the European Patent Office, South Korea, India,

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Indonesia, Russia and South Africa with claims related to neoantigen identification and related uses and manufacture. Any patents that may issue from these pending patent applications are expected to expire between 2036 and 2039, absent any patent term adjustments or extensions. These patent applications are all composition of matter, use, or process patent applications related to GRANITE-001.

As of July 31, 2018, our solely-owned patent portfolio related to our shared antigen-based platform includes three pending U.S. provisional patent applications with claims related to shared antigens, shared antigen-binding proteins, and their related uses and manufacture. Any patents that may issue from these pending patent applications are expected to expire between 2038 and 2039, absent any patent term adjustments or extensions.

We also have agreements with Sanquin Reagents B.V. and other third parties, including Sanquin Reagents B.V., under which we have rights to certain intellectual property, such as patents or patent applications.

In addition to patents, we have filed for trademark registration with the United States Patent and Trademark Office, or the USPTO, for "Gritstone," "Granite", "Slate" and our logo. Furthermore, we rely upon trade secrets, know-how and continuing technological innovation to develop and maintain our competitive position.

In some instances, we submit patent applications directly with the USPTO as provisional patent applications. Provisional applications for patents were designed to provide a lower-cost first patent filing in the United States. Corresponding non-provisional patent applications must be filed not later than 12 months after the provisional application filing date. The corresponding non-provisional application benefits in that the priority date(s) of the patent application is/are the earlier provisional application filing date(s), and the patent term of the finally issued patent is calculated from the later non-provisional application filing date. This system allows us to obtain an early priority date, add material to the patent application(s) during the priority year, obtain a later start to the patent term and to delay prosecution costs, which may be useful in the event that we decide not to pursue examination in an application. We file U.S. non-provisional applications and Patent Cooperation Treaty, or PCT, applications that claim the benefit of the priority date of earlier filed provisional applications, when applicable. The PCT system allows a single application to be filed within 12 months of the original priority date of the patent application, and to designate all of the 152 PCT member states in which national patent applications can later be pursued based on the international patent application filed under the PCT. The PCT searching authority performs a patentability search and issues a non-binding patentability opinion which can be used to evaluate the chances of success for the national applications in foreign countries prior to having to incur the filing fees. Although a PCT application does not issue as a patent, it allows the applicant to seek protection in any of the member states through national-phase applications.

At the end of the period of two and a half years from the first priority date of the patent application, separate patent applications can be pursued in any of the PCT member states either by direct national filing or, in some cases by filing through a regional patent organization, such as the European Patent Organization. The PCT system delays expenses, allows a limited evaluation of the chances of success for national/regional patent applications and enables substantial savings where applications are abandoned within the first two and a half years of filing.

For all patent applications, we determine claiming strategy on a case-by-case basis. Advice of counsel and our business model and needs are always considered. We file patents containing claims for protection of all useful applications of our proprietary technologies and any products, as well as all new applications and/or uses we discover for existing technologies and products, assuming these are strategically valuable. We continuously reassess the number and type of patent applications, as well as the pending and issued patent claims to ensure that maximum coverage and value are obtained for our

processes, and compositions, given existing patent office rules and regulations. Further, claims may be modified during patent prosecution to meet our intellectual property and business needs.

We recognize that the ability to obtain patent protection and the degree of such protection depends on a number of factors, including the extent of the prior art, the novelty and non-obviousness of the invention, and the ability to satisfy the enablement requirement of the patent laws. The patent positions of biotechnology companies like ours are generally uncertain and involve complex legal, scientific and factual questions. In addition, the coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted or further altered even after patent issuance. Consequently, we may not obtain or maintain adequate patent protection for any of our product candidates or for our technology platform. We cannot predict whether the patent applications we are currently pursuing will issue as patents in any particular jurisdiction or whether the claims of any issued patents will provide sufficient proprietary protection from competitors. Any patents that we hold may be challenged, circumvented or invalidated by third parties.

Our commercial success will also depend in part on not infringing the proprietary rights of third parties. In addition, we have licensed rights under proprietary technologies of third parties to develop, manufacture and commercialize specific aspects of our products. It is uncertain whether the issuance of any third party patent would require us to alter our development or commercial strategies, alter our processes, obtain licenses or cease certain activities. The expiration of patents or patent applications licensed from third parties or our breach of any license agreements or failure to obtain a license to proprietary rights that we may require to develop or commercialize our future technology may have a material adverse impact on us. If third parties prepare and file patent applications in the United States that also claim technology to which we have rights, we may have to participate in interference proceedings in the USPTO to determine priority of invention.

We further own trade secrets relating to our technology, and we maintain the confidentiality of proprietary information to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection. We seek to protect our trade secrets and know-how by entering into confidentiality agreements with third parties, consultants and employees who have access to such trade secrets and know-how. These agreements provide that all confidential information concerning our business or financial affairs developed or made known to the individual during the course of the individual's relationship with us are to be kept confidential and not disclosed to third parties except in specific circumstances. In addition, we enter into employment agreements that require employees to assign to us any inventions, trade secrets or know-how that they develop while employed by us. Although we take steps to protect our proprietary information and trade secrets, including through agreements with our employees and consultants, these agreements may be breached, or third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. Thus, we may not be able to meaningfully protect our trade secrets. To the extent that our employees, consultants, scientific advisors or other contractors use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know how and inventions.

For a more comprehensive discussion of the risks related to our intellectual property, please see "Risk Factors—Risks Related to Intellectual Property."

Government Regulation

The FDA and other regulatory authorities at federal, state, and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, import, export, safety, effectiveness, labeling, packaging, storage, distribution, record keeping, approval, advertising, promotion, marketing, post-approval monitoring, and post-approval reporting of biologics such as those we are developing. We, along with third-party contractors, will be

required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies of the countries in which we wish to conduct studies or seek approval or licensure of our product candidates.

The process required by the FDA before biologic product candidates may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests and animal studies performed in accordance with the FDA's current Good Laboratory Practices, or GLP, regulation;
- submission to the FDA of an IND, which must become effective before clinical trials may begin and must be updated annually or when significant changes are made;
- approval by an independent Institutional Review Board, or IRB, or ethics committee at each clinical site before the trial is commenced;
- performance of adequate and well-controlled human clinical trials to establish the safety, purity and potency of the proposed biologic product candidate for its intended purpose;
- preparation of and submission to the FDA of a BLA after completion of all pivotal clinical trials;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- a determination by the FDA within 60 days of its receipt of a BLA to file the application for review;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the proposed product is produced to assess compliance with cGMP and to assure that the facilities, methods and controls are adequate to preserve the biological product's continued safety, purity and potency, and of selected clinical investigation sites to assess compliance with Good Clinical Practices, or GCP; and
- FDA review and approval of the BLA to permit commercial marketing of the product for particular indications for use in the United States.

Preclinical and Clinical Development

Prior to beginning the first clinical trial with a product candidate, we must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new drug product to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical studies. The IND also includes results of animal and in vitro studies assessing the toxicology, pharmacokinetics, pharmacology, and pharmacodynamic characteristics of the product; chemistry, manufacturing, and controls information; and any available human data or literature to support the use of the investigational product. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

In addition to the IND submission process, sponsors of certain clinical studies of cells containing recombinant or synthetic nucleic acid molecules, including human gene transfer studies, must comply with the National Institutes of Health, or NIH, Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules, or NIH Guidelines. Although compliance with the NIH Guidelines is mandatory for research conducted at or sponsored by institutions receiving NIH funding of recombinant or synthetic nucleic acid molecule research, many companies and other institutions not otherwise subject to the NIH Guidelines voluntarily follow them. The NIH Guidelines set forth the principles and requirements for NIH and institutional oversight of research with recombinant or synthetic nucleic acid

molecules, including the standards for investigators and institutions to follow to ensure the safe handling and containment of such molecules. A subset of human gene transfer protocols are subject to review by the NIH Recombinant DNA Advisory Committee, or RAC, a federal advisory committee that provides recommendations regarding research involving recombinant or synthetic nucleic acid molecules. Specifically, RAC review of a protocol is required in exceptional cases where (1) an oversight body such as an Institutional Biosafety Committee, or IBC, which provides local review and oversight of research utilizing recombinant or synthetic nucleic acid molecules, or an IRB determines that the protocol would significantly benefit from RAC review, and (2) the protocol (a) uses a new vector, genetic material, or delivery methodology that represents a first-in-human experience and thus presents an unknown risk, and/or (b) relies on preclinical safety data that were obtained using a new preclinical model system of unknown and unconfirmed value, and/or (c) involves a proposed vector, gene construct, or method of delivery associated with possible toxicities that are not widely known and that may render it difficult for oversight bodies to evaluate the protocol rigorously. The RAC review proceedings are public, and reports are posted publicly to the website for the NIH's Office of Biotechnology Activities. Independent of RAC review, the NIH Guidelines also require all human gene transfer protocols subject to the NIH Guidelines to be registered with NIH, with limited exemptions. A study subject to the NIH Guidelines may not begin until the IBC approves the protocol, and the IBC cannot approve the protocol until confirmation from the NIH that such registration is complete. In the event that RAC review is warranted, the protocol registration process cannot be completed until RAC review has taken place.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site, and must monitor the study until completed. Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries.

For purposes of BLA approval, human clinical trials are typically conducted in three sequential phases that may overlap.

- Phase 1—The investigational product is initially introduced into healthy human subjects or patients with the target disease or condition. These studies are designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness.
- Phase 2—The investigational product is administered to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.

- Phase 3—The investigational product is administered to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval.

In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product. These so-called Phase 4 studies may be made a condition to approval of the BLA. Concurrent with clinical trials, companies may complete additional animal studies and develop additional information about the biological characteristics of the product candidate, and must finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, must develop methods for testing the identity, strength, quality and purity of the final product, or for biologics, the safety, purity and potency. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

BLA Submission and Review

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of a BLA requesting approval to market the product for one or more indications. The BLA must include all relevant data available from pertinent preclinical and clinical studies, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls, and proposed labeling, among other things. The submission of a BLA requires payment of a substantial application user fee to FDA, unless a waiver or exemption applies.

Once a BLA has been submitted, the FDA's goal is to review standard applications within ten months after it accepts the application for filing, or, if the application qualifies for priority review, six months after the FDA accepts the application for filing. In both standard and priority reviews, the review process is often significantly extended by FDA requests for additional information or clarification. The FDA reviews a BLA to determine, among other things, whether a product is safe, pure and potent and the facility in which it is manufactured, processed, packed, or held meets standards designed to assure the product's continued safety, purity and potency. The FDA may convene an advisory committee to provide clinical insight on application review questions. Before approving a BLA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

After the FDA evaluates a BLA and conducts inspections of manufacturing facilities where the investigational product and/or its drug substance will be produced, the FDA may issue an approval letter or a Complete Response letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A Complete Response letter will describe all of the deficiencies that the FDA has identified in the BLA, except that where the FDA

determines that the data supporting the application are inadequate to support approval, the FDA may issue the Complete Response letter without first conducting required inspections, testing submitted product lots, and/or reviewing proposed labeling. In issuing the Complete Response letter, the FDA may recommend actions that the applicant might take to place the BLA in condition for approval, including requests for additional information or clarification. The FDA may delay or refuse approval of a BLA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval will be granted for particular indications and may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the BLA with a Risk Evaluation and Mitigation Strategy, or REMS, to ensure the benefits of the product outweigh its risks. A REMS is a safety strategy to manage a known or potential serious risk associated with a product and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase 4 postmarket studies and surveillance to further assess and monitor the product's safety and effectiveness after commercialization, and may limit further marketing of the product based on the results of these post-marketing studies.

Expedited Development and Review Programs

The FDA offers a number of expedited development and review programs for qualifying product candidates. The fast track program is intended to expedite or facilitate the process for reviewing new products that meet certain criteria. Specifically, new products are eligible for fast track designation if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. Fast track designation applies to the combination of the product and the specific indication for which it is being studied. The sponsor of a fast track product has opportunities for frequent interactions with the review team during product development and, once a BLA is submitted, the product may be eligible for priority review. A fast track product may also be eligible for rolling review, where the FDA may consider for review sections of the BLA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the BLA, the FDA agrees to accept sections of the BLA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the BLA.

A product intended to treat a serious or life-threatening disease or condition may also be eligible for breakthrough therapy designation to expedite its development and review. A product can receive breakthrough therapy designation if preliminary clinical evidence indicates that the product may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The designation includes all of the fast track program features, as well as more intensive FDA interaction and guidance beginning as early as Phase 1 and an organizational commitment to expedite the development and review of the product, including involvement of senior managers.

Any marketing application for a biologic submitted to the FDA for approval, including a product with a fast track designation and/or breakthrough therapy designation, may be eligible for other types of FDA programs intended to expedite the FDA review and approval process, such as priority review and accelerated approval. A product is eligible for priority review if it has the potential to provide a

significant improvement in the treatment, diagnosis or prevention of a serious disease or condition compared to marketed products. For products containing new molecular entities, priority review designation means the FDA's goal is to take action on the marketing application within six months of the 60-day filing date (compared with ten months under standard review).

Additionally, products studied for their safety and effectiveness in treating serious or life-threatening diseases or conditions may receive accelerated approval upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of accelerated approval, the FDA will generally require the sponsor to perform adequate and well-controlled post-marketing clinical studies to verify and describe the anticipated effect on irreversible morbidity or mortality or other clinical benefit. In addition, the FDA currently requires as a condition for accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

In 2017, FDA established a new regenerative medicine advanced therapy, or RMAT, designation as part of its implementation of the 21st Century Cures Act. The RMAT designation program is intended to fulfill the 21st Century Cures Act requirement that FDA facilitate an efficient development program for, and expedite review of, any drug that meets the following criteria: (1) it qualifies as a RMAT, which is defined as a cell therapy, therapeutic tissue engineering product, human cell and tissue product, or any combination product using such therapies or products, with limited exceptions; (2) it is intended to treat, modify, reverse, or cure a serious or life-threatening disease or condition; and (3) preliminary clinical evidence indicates that the drug has the potential to address unmet medical needs for such a disease or condition. Like breakthrough therapy designation, RMAT designation provides potential benefits that include more frequent meetings with FDA to discuss the development plan for the product candidate and eligibility for rolling review and priority review. Products granted RMAT designation may also be eligible for accelerated approval on the basis of a surrogate or intermediate endpoint reasonably likely to predict long-term clinical benefit, or reliance upon data obtained from a meaningful number of sites, including through expansion to additional sites. Once approved, when appropriate, the FDA can permit fulfillment of post-approval requirements under accelerated approval through the submission of clinical evidence, clinical studies, patient registries, or other sources of real world evidence such as electronic health records; through the collection of larger confirmatory datasets; or through post-approval monitoring of all patients treated with the therapy prior to approval.

Fast track designation, breakthrough therapy designation, priority review, accelerated approval, and RMAT designation do not change the standards for approval but may expedite the development or approval process.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, which is a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States for which there is no reasonable expectation that the cost of developing and making available in the United States a drug or biologic for this type of disease or condition will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting a BLA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. The orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review or approval process.

If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan drug exclusive approval (or exclusivity), which means that the FDA may not approve any other applications, including a full BLA, to market the same biologic for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity. Orphan drug exclusivity does not prevent FDA from approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the BLA application fee.

A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

Post-Approval Requirements

Any products manufactured or distributed by us pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting, product sampling and distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing user fee requirements, under which FDA assesses an annual program fee for each product identified in an approved BLA. Biologic manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting requirements upon us and any third-party manufacturers that we may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical studies to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of a product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of existing product approvals;
- product seizure or detention, or refusal of the FDA to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the marketing, labeling, advertising and promotion of biologics. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products.

Biosimilars and Reference Product Exclusivity

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively, the ACA, signed into law in 2010, includes a subtitle called the Biologics Price Competition and Innovation Act of 2009, or BPCIA, which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-approved reference biological product. To date, a number of biosimilars have been licensed under the BPCIA, and numerous biosimilars have been approved in Europe. The FDA has issued several guidance documents outlining an approach to review and approval of biosimilars.

Biosimilarity, which requires that there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity, and potency, can be shown through analytical studies, animal studies, and a clinical study or studies. Interchangeability requires that a product is biosimilar to the reference product and the product must demonstrate that it can be expected to produce the same clinical results as the reference product in any given patient and, for products that are administered multiple times to an individual, the biologic and the reference biologic may be alternated or switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic. Complexities associated with the larger, and often more complex, structures of biological products, as well as the processes by which such products are manufactured, pose significant hurdles to implementation of the abbreviated approval pathway that are still being worked out by the FDA.

Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing that applicant's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of its product. The BPCIA also created certain exclusivity periods for biosimilars approved as interchangeable products. At this juncture, it is unclear whether products deemed "interchangeable" by the FDA will, in fact, be readily substituted by pharmacies, which are governed by state pharmacy law.

The BPCIA is complex and continues to be interpreted and implemented by the FDA. In addition, recent government proposals have sought to reduce the 12-year reference product exclusivity period. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. As a result, the ultimate impact, implementation, and impact of the BPCIA is subject to significant uncertainty.

Other Healthcare Laws and Compliance Requirements

Pharmaceutical companies are subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct their business. Such laws include, without limitation: the U.S. federal Anti-Kickback Statute, which prohibits, among other things, persons and entities from knowingly and willfully soliciting, receiving, offering or paying remuneration, to induce, or in return for, either the referral of an individual, or the purchase or recommendation of an item or service for which payment may be made under any federal healthcare program; federal civil and criminal false claims laws and civil monetary penalty laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment to the federal government, including federal healthcare programs, that are false or fraudulent; HIPAA, which created additional federal criminal statutes which prohibit, among other things, executing a scheme to defraud any healthcare benefit program and making false statements relating to healthcare matters, and which, as amended by HITECH, also imposes certain requirements on HIPAA covered entities and their business associates relating to the privacy, security and transmission of individually identifiable health information; the U.S. federal Physician Payments Sunshine Act, which requires certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program, with specific exceptions, to annually report to the federal government, information related to payments or other transfers of value made to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members; and U.S. state and foreign law equivalents of each of the above federal laws, which, in some cases, differ from each other in significant ways, and may not have the same effect, thus complicating compliance efforts. If their operations are found to be in violation of any of such laws or any other governmental regulations that apply, they may be subject to penalties, including, without limitation, civil, criminal and administrative penalties, damages, fines, exclusion from government-funded healthcare programs, such as Medicare and Medicaid or similar programs in other countries or jurisdictions, integrity oversight and reporting obligations to resolve allegations of non-compliance, disgorgement, individual imprisonment, contractual damages, reputational harm, diminished profits and the curtailment or restructuring of our operations.

Coverage and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any pharmaceutical or biological product for which we obtain regulatory approval. Sales of any product depend, in part, on the extent to which such product will be covered by third-party payors, such as federal, state, and foreign government healthcare programs, commercial insurance and managed healthcare organizations, and the level of reimbursement for such product by third-party payors. Decisions regarding the extent of coverage and amount of reimbursement to be provided are made on a plan-by-plan basis. For products administered under the supervision of a physician, obtaining coverage and adequate reimbursement may be particularly difficult because of the higher prices often associated with such drugs. Additionally, separate reimbursement for the product itself or the treatment or procedure in which the product is used may not be available, which may impact physician utilization.

In addition, the U.S. government, state legislatures and foreign governments have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. Third-party payors are increasingly challenging the prices charged for medical products and services, examining the medical necessity and reviewing the cost effectiveness of pharmaceutical or biological products, medical devices and medical services, in addition to questioning safety and efficacy. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit sales of any product. Decreases in third-party

reimbursement for any product or a decision by a third-party payor not to cover a product could reduce physician usage and patient demand for the product. No regulatory authority has granted approval for a personalized cancer immunotherapy based on a vaccine approach, and there is no model for reimbursement of this type of product.

Healthcare Reform

The United States and some foreign jurisdictions are considering or have enacted a number of reform proposals to change the healthcare system. There is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by federal and state legislative initiatives, including those designed to limit the pricing, coverage, and reimbursement of pharmaceutical and biopharmaceutical products, especially under government-funded health care programs, and increased governmental control of drug pricing.

In March 2010, the ACA was signed into law, which substantially changed the way healthcare is financed by both governmental and private insurers in the United States, and significantly affected the pharmaceutical industry. The ACA contains a number of provisions of particular import to the pharmaceutical and biotechnology industries, including, but not limited to, those governing enrollment in federal healthcare programs, a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, and annual fees based on pharmaceutical companies' share of sales to federal health care programs. Since its enactment, there have been judicial and Congressional challenges to certain aspects of the ACA, and we expect there will be additional challenges and amendments to the ACA in the future. For example, the Tax Cuts and Jobs Act was enacted, which, among other things, removes penalties for not complying with ACA's individual mandate to carry health insurance. Since the enactment of the Tax Cuts and Jobs Act of 2017, there have been additional amendments to certain provisions of the ACA, and the current Trump administration and Congress may continue to seek to modify, repeal, or otherwise invalidate all, or certain provisions of, the ACA. It is still uncertain whether any changes will take time to unfold, and their potential impact on coverage and reimbursement for healthcare items and services, among other things.

Other legislative changes have been proposed and adopted since the ACA was enacted, including aggregate reductions of Medicare payments to providers of 2% per fiscal year and reduced payments to several types of Medicare providers. Moreover, there has recently been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. At the federal level, the Trump administration's budget proposal for fiscal year 2019 contains further drug price control measures that could be enacted during the 2019 budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid, and to eliminate cost sharing for generic drugs for low-income patients. Further, the Trump administration released a "Blueprint", or plan, to lower drug prices and reduce out of pocket costs of drugs that contains additional proposals to increase drug manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products, and reduce the out of pocket costs of drug products paid by consumers. The Department of Health and Human Services, or HHS, has already started the process of soliciting feedback on some of these measures and, at the same time, is immediately implementing others under its existing authority. While some proposed measures will

require authorization through additional legislation to become effective, Congress and the Trump administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

Our Interactions with the FDA

Medical Device

In two separate FDA interactions, the FDA advised us that our machine learning software will not be developed under medical device diagnostic regulations. In August 2016, the FDA's Center for Devices and Radiological Health, or CDRH, determined that the TSNA prediction software is a Non-Significant Risk, or NSR, device, and an investigational device exemption, or IDE, submission is not required to conduct clinical studies with our product candidate. In April 2017, the FDA's Center for Biologics Evaluation and Research, or CBER, confirmed that medical device diagnostic regulations do not apply to our testing and processing of the patient-specific TSNA, and that quality requirements could be met through compliance with biologic cGMPs. Based on these interactions, we believe no additional device-related regulatory submissions (such as an IDE or pre-market approval application (PMA)) or device development activities are required and our TSNA prediction software procedure will be regulated as part of our cGMP manufacturing process.

Preclinical Safety

To address the personalized nature of our therapy in a Pre-Pre-IND interaction with the FDA's CBER Office of Tissues and Advanced Therapies, or OTAT, the FDA advised us that a single toxicological animal study with a representative vector may be able to support preclinical safety for purposes of IND submission. Subsequent to this discussion, we submitted proposed protocols for GLP toxicology and biodistribution studies for OTAT's review in connection with a Pre-IND meeting, and OTAT agreed that a single GLP toxicology study could support IND submission. In this GLP toxicology study, we administered our ChAdV and the SAM vectors to Indian Rhesus macaques. The heterologous prime-boost immunotherapy approach when administered intramuscularly was well tolerated at the clinical maximal dose of each platform, with some animals presenting flu-like symptoms. Preclinical chemistry findings include a transient increase in select cytokines, which resolved rapidly. Based upon these IND-enabling results, we do not anticipate the FDA will require additional preclinical testing prior to our proposed Phase 1 clinical study of GRANITE-001.

Clinical Regulatory

In our Pre-IND meeting with OTAT, the FDA previewed Clinical Protocol GO-004 and confirmed that the overall design appeared reasonable, while providing comments on the study populations and dose determination which we have incorporated into the protocol. OTAT also agreed with our dose limiting toxicity assessment criteria, while reserving comment on the starting dose and dose escalation pending the completion of planned preclinical studies. Based on our IND-enabling preclinical results, we intend to include these elements in the protocol which, if authorized by the FDA in our IND submission for GRANITE-001, may permit a faster progression and fewer patients to reach the clinical protocol's combination cohort (Phase 1, Part C).

Regulatory Chemistry, Manufacturing & Controls

In a Type-C Facilities meeting with the FDA's CBER Division of Manufacturing and Product Quality, or DMPQ, we obtained FDA feedback on our proposed design for the multi-use clinical

manufacturing facility in Pleasanton, California. Importantly, the FDA concurred with our plan to build a facility designed to accommodate manufacture of multiple patient-specific lots in parallel within the same manufacturing suite, which we expect will provide a substantial increase in scalability within a smaller allocation of cleanrooms. At our subsequent Pre-IND meeting with OTAT, the FDA agreed with our proposed use of select rapid release testing methods in which we proposed replacing standard cell-culture based tests with faster polymerase chain reaction methods. As agreed with the FDA, we plan to submit qualification of these methods in our IND submission for GRANITE-001. The FDA also agreed that our proposed stability program was generally acceptable to support the proposed Phase 1 clinical study of GRANITE-001, where only one representative patient lot per year will be placed on product stability during conduct of the clinical program.

Employees

As of August 20, 2018, we had 100 full-time employees, including a total of 33 employees with M.D. or Ph.D. degrees. Within our workforce, 84 employees are engaged in research and development and 16 are engaged in business development, finance, legal, human resources, facilities, information technology and general management and administration. None of our employees are represented by labor unions or covered by collective bargaining agreements. We consider our relationship with our employees to be good.

Facilities

Our corporate headquarters are located in Emeryville, California, where we lease and occupy approximately 13,100 square feet of office and laboratory space. The current term of our Emeryville lease expires in March 2023, with an option to extend the term through March 2026. We also lease approximately 13,900 square feet of office and laboratory space in Cambridge, Massachusetts. The current term of our Cambridge lease expires in April 2022, with an option to extend the term through April 2025.

We lease a manufacturing facility in Pleasanton, California, where we occupy approximately 42,600 square feet of space. The current term of our lease expires in November 2024, with an option to extend the term through November 2029.

We believe our existing facilities are sufficient for our needs for the foreseeable future. To meet the future needs of our business, we may lease additional or alternate space, and we believe suitable additional or alternative space will be available in the future on commercially reasonable terms.

Legal Proceedings

From time to time, we may become involved in litigation or other legal proceedings. We are not currently a party to any litigation or legal proceedings that, in the opinion of our management, are likely to have a material adverse effect on our business. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

MANAGEMENT**Executive Officers and Directors**

The following table sets forth information regarding our executive officers and directors as of August 20, 2018:

Name	Age	Position(s)
Executive Officers and Employee Director		
Andrew Allen, M.D., Ph.D.	52	President, Chief Executive Officer and Director
Jayant Aphale, Ph.D.	57	Executive Vice President, Technical Operations
Jean-Marc Bellemin	45	Executive Vice President, Chief Financial Officer
Matthew Hawryluk, Ph.D.	40	Executive Vice President, Chief Business Officer
Erin Jones	46	Senior Vice President, Global Head of Regulatory Affairs and Quality Assurance
Karin Jooss, Ph.D.	53	Executive Vice President of Research, Chief Scientific Officer
Raphaël Rousseau, M.D., Ph.D.	49	Executive Vice President, Chief Medical Officer
Roman Yelensky, Ph.D.	40	Executive Vice President, Chief Technology Officer
Non-Employee Directors		
Richard Heyman, Ph.D.	60	Director
Steve Krognnes	50	Director
Judith Li	34	Director
Nicholas Simon	64	Director
Peter Svernilson	56	Director
Thomas Woiwode, Ph.D.	46	Director

Executive Officers and Employee Director

Andrew Allen, M.D., Ph.D. co-founded Gritstone Oncology, Inc. and has served as our President and Chief Executive Officer and a member of our board of directors since August 2015. Prior to Gritstone, in April 2009, Dr. Allen co-founded Clovis Oncology, Inc., or Clovis, a public pharmaceutical development company, and served as its executive vice president of clinical and preclinical development and chief medical officer from April 2009 to July 2015. Prior to that, he was chief medical officer at Pharmion Corporation from 2006 to 2008. Previously, Dr. Allen served in clinical development leadership roles at Chiron Corporation and Abbott Laboratories, and worked at McKinsey & Company, where he advised life science companies on strategic issues. He currently serves on the board of directors of Epizyme, Inc., a publicly traded biopharmaceutical company, Sierra Oncology, Inc., a public biopharmaceutical company, and Revitope Inc., a privately-held biotechnology company. Dr. Allen previously served on the board of directors of Cell Design Labs, a private biotechnology company, from November 2015 until its acquisition by Gilead Sciences, Inc. in December 2017. Dr. Allen qualified in medicine at Oxford University and received a Ph.D. in immunology from Imperial College of Science, Technology and Medicine in London. We believe Dr. Allen is qualified to serve on our board of directors due to his educational experience and his experience as a senior executive of biotechnology and pharmaceutical companies, including his service as our chief executive officer.

Jayant Aphale, Ph.D. has served as our Executive Vice President, Technical Operations since March 2018. Prior to Gritstone, from December 2011 to March 2018, Dr. Aphale served as vice president, technical operations for Sarepta Therapeutics, Inc., a public biopharmaceutical company.

Previously, he held senior manufacturing and technical operations roles at GlaxoSmithKline plc, Enobia Pharma Corp., Acambis Inc., Wyeth Pharmaceuticals, Inc., FUJIFILM Diosynth Biotechnologies USA, Inc. and F. Hoffmann-La Roche AG, or Roche. Dr. Aphale received his B.S. in microbiology from the University of Pune in India, his Ph.D. in microbiology from Ohio State University and an M.B.A. in finance and strategy from the University of North Carolina.

Jean-Marc Bellemin has served as our Executive Vice President of Finance and Chief Financial Officer since January 2018. Prior to Gritstone, from January 2008 to December 2017, Mr. Bellemin served as senior vice president, market access, business solutions and services of Actelion Pharmaceuticals US Inc., or Actelion, a biotechnology company, until Actelion was acquired by Johnson & Johnson in 2017. Prior to Actelion, Mr. Bellemin held several financial leadership roles at Guerbet Group. Mr. Bellemin received a university degree in economics, a master's degree in finance from Université Paris Dauphine, a postgraduate degree in finance and accounting from Université Paris II Panthéon-Assas and an M.B.A. from the ESSEC Business School in Paris, France.

Matthew Hawryluk, Ph.D. has served as our Executive Vice President and Chief Business Officer since October 2015. Prior to Gritstone, from April 2011 to October 2015, Dr. Hawryluk held positions of increasing responsibility at Foundation Medicine, Inc., or Foundation Medicine, a public molecular diagnostics company, most recently serving as vice president, corporate and business development. Previously, he held roles in business development, marketing and product management across multiple divisions of Thermo Fisher Scientific, Inc. Dr. Hawryluk received a B.S. from the University of Notre Dame, a Ph.D. in cell biology and protein biochemistry from the University of Pittsburgh School of Medicine and an M.B.A. at Carnegie Mellon University's Tepper School of Business as a Swartz Entrepreneurial Fellow.

Erin Jones has served as our Senior Vice President, Global Head of Regulatory Affairs and Quality Assurance since May 2016. Prior to Gritstone, from July 2014 to April 2016, Mr. Jones served as vice president, global head of regulatory affairs, medical writing, pharmacology and toxicology at Puma Biotechnology, Inc., or Puma, a public biopharmaceutical company. Prior to Puma, Mr. Jones served as director, regulatory affairs at BioMarin Pharmaceutical Inc. from July 2012 to July 2014. Earlier in his career, Mr. Jones held various positions at Genentech, Inc., or Genentech, a biotechnology corporation and subsidiary of Roche, including head of regulatory intelligence and leader of the HER Franchise Regulatory Group. Mr. Jones received a B.S. in microbiology and chemistry from the University of Pittsburgh and an M.S. in computer systems from Pennsylvania State University.

Karin Jooss, Ph.D. has served as our Executive Vice President of Research and Chief Scientific Officer since April 2016. Prior to Gritstone, from May 2009 to April 2016, Dr. Jooss served as head of cancer immuno-therapeutics in the vaccine immuno-therapeutics department at Pfizer, Inc., or Pfizer, a public pharmaceutical company, where she was also a member of the vaccine immuno-therapeutics leadership team and served as head of the immuno-pharmacology team. Prior to joining Pfizer, Dr. Jooss served as vice president of research at Cell Genesys, Inc., or Cell Genesys, from June 2005 to April 2009, and as senior director of research at Cell Genesys from July 2001 to June 2005. She is on the editorial board of Molecular Therapy and the Journal of Gene Medicine and is a member of the Immunology and Educational Committee of the American Society of Gene & Cell Therapy and the Industry Task Force of the Society for Immunotherapy of Cancer. Dr. Jooss received her diploma in theoretical medicine from the University of Marburg in Germany, a Ph.D. in molecular biology and immunology from the University of Marburg in Germany and performed postgraduate work in gene therapy and immunology at the University of Pennsylvania.

Raphaël Rousseau, M.D., Ph.D. has served as our Executive Vice President, Chief Medical Officer since April 2017. Prior to Gritstone, from July 2012 to March 2017, Dr. Rousseau served as

senior group medical director and global franchise head, pediatrics of Genentech. Before Genentech, Dr. Rousseau was senior medical director and lead of the pediatric global development team at Roche from October 2010 to June 2012, and international medical leader, hematology, at Roche from January 2009 to September 2010. Before joining Roche, Dr. Rousseau was a professor of medical and pediatric oncology at the Université Claude Bernard in Lyon, France. At the Léon Bérard Comprehensive Cancer Center in Lyon, Dr. Rousseau was head of the pediatric translational research program. Earlier in his career, he was a clinical fellow at Texas Children's Cancer Center and a research fellow at the Center for Cell and Gene Therapy at Baylor College of Medicine in Houston. He received a Ph.D. in therapeutic biotechnologies at the Université Denis Diderot and an M.D. from Université René Descartes, both in Paris. He is board certified in pediatrics and has a sub-specialty certification in pediatric hematology-oncology.

Roman Yelensky, Ph.D. has served as our Executive Vice President, Chief Technology Officer since October 2015. He joined Gritstone at its inception in October 2015 as executive vice president of sequencing and bioinformatics. Prior to Gritstone, from July 2010 to September 2015, Dr. Yelensky served as vice president of biomarker and companion diagnostic development at Foundation Medicine. Prior to Foundation Medicine, Dr. Yelensky was a senior scientist in biomarker development at Novartis AG from April 2009 to July 2010. He received a B.A. in computer science from Cornell University, an M.S. in computer science from Stanford University and a Ph.D. in bioinformatics and integrative genomics from the Harvard-MIT Division of Health Sciences and Technology.

Non-Employee Directors

Richard Heyman, Ph.D. has served as a member of our board of directors since November 2015. Dr. Heyman is executive chairman and co-founder of Metacrine, Inc., a biotechnology company developing new therapeutics for the treatment of diabetes and related metabolic disorders. From August 2013 to April 2015, he served as president and chief executive officer of Seragon Pharmaceuticals Inc., or Seragon, a privately-held biotechnology company, which was acquired by Genentech in 2014. Prior to Seragon, in 2009 he co-founded and served as president and chief executive officer of Aragon Pharmaceuticals, Inc., or Aragon, until it was purchased by Johnson & Johnson in 2013. Earlier in his career, Dr. Heyman co-founded and served as chief scientific officer of X-Ceptor Therapeutics, Inc. and was vice president of research at Ligand Pharmaceuticals, Inc. He is the author or inventor on more than 120 publications and patents. Dr. Heyman serves as vice chairman of the board of trustees of the Salk Institute for Biological Studies, or the Salk Institute, and is a board member of BIOCOM Life Sciences Association of California. He is also a member of the Therapeutic Advisory Board for aTyr Pharma, Inc. and serves on the Executive Committee of the University of California, San Diego Moores Cancer Center. Dr. Heyman received a B.S. in chemistry from the University of Connecticut and a Ph.D. in pharmacology from the University of Minnesota. He was an NIH post-doctoral fellow and staff scientist at the Salk Institute. We believe that Dr. Heyman is qualified to serve on our board of directors due to his educational background and his experience as a board member and senior executive of biotechnology and pharmaceutical companies.

Steve Krognnes has served as a member of our board of directors since July 2018. Mr. Krognnes has served as chief financial officer of Denali Therapeutics Inc., or Denali, since October 2015. Mr. Krognnes joined Denali from Genentech, where he served as chief financial officer and a member of the executive committee from April 2009 to September 2015. Mr. Krognnes also oversaw Genentech's site services organization between 2011 and 2015, and Genentech's information technology organization between 2009 and 2011. He chaired the Genentech Access to Care Foundation between 2009 and 2015. From January 2004 to April 2009, Mr. Krognnes served as head of mergers and acquisitions and a member of the finance executive committee at Roche, a Swiss biotechnology company. From July 2002 to December 2003, Mr. Krognnes served as director of mergers and acquisitions at Danske Bank

based in Norway. From April 2000 to June 2002, he was a venture capitalist with Pylonia Ventures, a Swedish venture investments company. Prior to that, Mr. Krognnes worked as a consultant at McKinsey & Company and an investment banker at Goldman Sachs, based in London and Boston. Mr. Krognnes currently serves as a member of the boards of directors of Corvus Pharmaceuticals, a publicly traded biopharmaceutical company, and RLS Global AB, a Swedish life sciences company. Mr. Krognnes served as a board member of the California Life Sciences Association between 2010 and 2015, and the California Academy of Sciences, a private scientific and educational institution, between 2014 and 2018. He received his M.B.A. from Harvard Business School and his B.S. in economics from the Wharton School of the University of Pennsylvania. We believe Mr. Krognnes is qualified to serve on our board of directors due to his experience as a board member and senior executive of biotechnology and pharmaceutical companies.

Judith Li has served as a member of our board of directors since September 2017. Ms. Li has served as a partner at Lilly Asia Ventures, or LAV, which is based in Hong Kong and Shanghai and focuses on early and growth stage investments across biopharmaceuticals, medical devices, and diagnostics both domestically and cross-border, since 2013. Judith currently holds board appointments at a variety of LAV's private portfolio companies, including Just Biotherapeutics, Inc., Veritas Genetics Inc., and Nextcure, Inc. From April 2014 to October 2017, she served on the board of Crown BioScience Inc., a biotechnology company which was publicly listed on the Taiwan Stock Exchange until it was acquired in December 2017. Previously, Ms. Li served as a senior business analyst at McKinsey & Company, worked in hospital administration at Partners Healthcare, and co-founded an interventional nephrology medical device venture. Judith holds a B.A. in biology from Harvard and an M.B.A. from Harvard Business School. We believe that Ms. Li is qualified to serve on our board of directors due to her experience as a board member of biotechnology and pharmaceutical companies, and her experience as an investor in new life sciences companies.

Nicholas Simon has served as a member of our board of directors since September 2015. Mr. Simon has been a managing director of Clarus Ventures, LLC, or Clarus, a venture capital firm focused on life sciences companies, since the firm's inception in 2005. Prior to Clarus, Mr. Simon was a general partner at MPM Capital, Inc., a healthcare venture capital firm. He has more than 20 years of operating and investment experience in the biopharmaceutical industry including serving as vice president of business and corporate development at Genentech from 1989 to 2000. In addition to Gritstone, Mr. Simon is currently a member of the board of directors Nuvelution Pharma, Inc., a private pharmaceutical company, as well as chairman of the board of Sientra, Inc., a public medical aesthetics company. He has also been a member of the board of directors of numerous private and public life sciences companies including Achillion Pharmaceuticals, Inc., Avanir Pharmaceuticals, Inc., Barrier Therapeutics, Inc., Biovitrum AB, CoTherix, Inc., InterMune, Inc., Pearl Therapeutics Inc., QuatRx Pharmaceuticals Co., Rigel Pharmaceuticals, Inc., and Sangstat Medical Corporation. Mr. Simon is also a member of the foundation board at the Gladstone Institute, a private not-for-profit research institute affiliated with the University of California, San Francisco. Mr. Simon received a B.S. in microbiology from the University of Maryland and an M.B.A. from Loyola University. We believe that Mr. Simon is qualified to serve on our board of directors due to his experience as a board member of biotechnology and pharmaceutical companies, and his experience as an investor in new life sciences companies.

Peter Svennilsson has served as a member of our board of directors since September 2015. In February 2007, Mr. Svennilsson founded The Column Group, LP, or The Column Group, a San Francisco-based biotechnology venture capital firm, and currently serves as its managing partner. Mr. Svennilsson also currently serves as a member of the board of Immune Design Corp., a public late-stage immunotherapy company. In addition, Mr. Svennilsson serves on the boards of a number of private companies, including serving as chairman of the board of ORIC Pharmaceuticals, Inc., a private biopharmaceutical company and as a member of the boards of member of NGM Biopharmaceuticals,

Inc., Constellation Pharmaceuticals, Inc. and Ribon Therapeutics, Inc. Previously, he served as chairman of the board of Seragon from January 2008 until it was acquired by Genentech in August 2014. He was the chairman of the board of Aragon from May 2009 until it was acquired by Johnson & Johnson in August 2013. Mr. Svennilson was also a board member of PTC Therapeutics, Inc. from 2012 until 2014. Prior to founding The Column Group, he founded Three Crowns Capital, where he served as its managing partner from June 1996 to February 2007. From 1996 to 2006, Mr. Svennilson served as a board member of multiple biotechnology companies, including Rosetta Inpharmatics LLC, ChemoCentryx, Inc. and Somalogic, Inc. Prior to founding Three Crowns Capital, from 1987 to 1993 he was the associate managing director in charge of European Investment Banking Origination at Nomura Securities in London. Mr. Svennilson is currently a trustee for the Institute for Advanced Study in Princeton, New Jersey. Mr. Svennilson received an M.B.A. from the Stockholm School of Economics and Finance. We believe that Mr. Svennilson is qualified to serve on our board of directors due to his experience in the venture capital industry and in serving as a director of other public life science companies.

Thomas Woiwode, Ph.D. has served as a member of our board of directors since September 2015. Dr. Woiwode has been with Versant Venture Management, LLC, or Versant Ventures, a healthcare investment firm, since 2002 in various capacities, serving as a managing director since July 2014 and previously as a venture partner from June 2011 to July 2014. He has also served in a number of operating roles over this time, most recently as the chief operating officer of Okairos AG, or Okairos, a biopharmaceutical company developing genetic vaccines for major infectious diseases, from April 2011 until May 2013. Prior to Okairos, Dr. Woiwode co-founded EuroVentures, a wholly owned biotechnology incubator within Versant Ventures, and in this role, served as the founding chief business officer for three biotechnology companies created within Versant Ventures. Before joining Versant Ventures, Dr. Woiwode also served as a research scientist at XenoPort, Inc. Dr. Woiwode currently serves on the board of directors of CRISPR Therapeutics AG and Adverum Biotechnologies, Inc., and served on the board of directors of Audentes Therapeutics, Inc. from July 2013 to July 2017. Dr. Woiwode also serves on the board of directors of several private companies. Dr. Woiwode holds a B.A. in English and a B.S. in Chemistry from the University of California, Berkeley and a Ph.D. in Organic Chemistry as an NSF Fellow from Stanford University. We believe that Dr. Woiwode is qualified to serve on our board of directors due to his educational background, his experience as a board member and senior executive of biotechnology and pharmaceutical companies, and his experience as an investor in new life sciences companies.

Board Composition

Director Independence

Our board of directors currently consists of seven members. Our board of directors has determined that all of our directors, other than Dr. Allen, qualify as “independent” directors in accordance with The Nasdaq Global Market listing requirements. Dr. Allen is not considered independent because he is an employee of Gritstone Oncology, Inc. The Nasdaq Global Market’s independence definition includes a series of objective tests, such as that the director is not, and has not been for at least three years, one of our employees and that neither the director nor any of his or her family members has engaged in various types of business dealings with us. In addition, as required by The Nasdaq Global Market rules, our board of directors has made a subjective determination as to each independent director that no relationships exists that, in the opinion of our board of directors, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In making these determinations, our board of directors reviewed and discussed information provided by the directors and us with regard to each director’s business and personal activities and relationships as they may relate to us and our management. There are no family relationships among any of our directors or executive officers.

Classified Board of Directors

In accordance with our amended and restated certificate of incorporation to be in effect immediately prior to the consummation of this offering, our board of directors will be divided into three classes with staggered, three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Effective upon the consummation of this offering, we expect that our directors will be divided among the three classes as follows:

- the Class I directors will be Ms. Li and Dr. Allen, and their terms will expire at the annual meeting of stockholders to be held in 2019;
- the Class II directors will be Drs. Heyman and Woiwode and Mr. Simon, and their terms will expire at the annual meeting of stockholders to be held in 2020; and
- the Class III directors will be Messrs. Krognnes and Svenilnson, and their terms will expire at the annual meeting of stockholders to be held in 2021.

Our amended and restated certificate of incorporation will provide that the authorized number of directors may be changed only by resolution of the board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control of our company.

Voting Arrangements

The election of the members of our board of directors is governed by the amended and restated voting agreement, that we entered into with certain holders of our common stock and certain holders of our convertible preferred stock and the related provisions of our amended and restated certificate of incorporation.

Pursuant to the voting agreement and these provisions the holders of our Series A convertible preferred stock, voting as a separate class, have the right to elect three directors to our board of directors, the holders of our Series B convertible preferred stock, voting as a separate class, have the right to elect one director to our board of directors, the holders of our common stock, voting as a separate class, have the right to elect one director to our board of directors and the holders of our common stock and our convertible preferred stock, voting together as a single class, have the right to elect the balance of the total number of our directors, which are designated as follows:

- one member designated by Versant Ventures and elected by the holders of a majority of our Series A convertible preferred stock, voting as a separate class, for which Dr. Woiwode has been designated;
- one member designated by The Column Group and elected by the holders of a majority of our Series A convertible preferred stock, voting as a separate class, for which Mr. Svenilnson has been designated;
- one member designated by Clarus and elected by the holders of a majority of our Series A convertible preferred stock, voting as a separate class, for which Mr. Simon has been designated;
- one member designated by LAV and elected by the holders of a majority of our Series B convertible preferred stock, voting as a separate class, for which Ms. Li has been designated;
- one member elected by the holders of a majority of the shares of our common stock, voting as a separate class, who shall be our then-serving Chief Executive Officer, for which Dr. Allen has been designated; and

- two members designated by the other members of our board of directors and elected by the holders of a majority of the shares of our common stock and convertible preferred stock, voting together as a single class, for which Dr. Heyman and Mr. Krognnes have been designated, with one vacancy.

The holders of our common stock and convertible preferred stock who are parties to our voting agreement are obligated to vote for such designees indicated above. The provisions of this voting agreement will terminate upon the consummation of this offering and our certificate of incorporation will be amended and restated, after which there will be no further contractual obligations or charter provisions regarding the election of our directors. Our directors hold office until their successors have been elected and qualified or appointed, or the earlier of their death, resignation or removal.

Leadership Structure of the Board

Our bylaws and corporate governance guidelines provide our board of directors with flexibility to combine or separate the positions of Chairman of the board of directors and Chief Executive Officer and to implement a lead director in accordance with its determination that utilizing one or the other structure would be in the best interests of our company. Dr. Heyman presides over the executive sessions of the board of directors and acts as a liaison between management and the board of directors.

Our board of directors has concluded that our current leadership structure is appropriate at this time. However, our board of directors will continue to periodically review our leadership structure and may make such changes in the future as it deems appropriate.

Role of Board in Risk Oversight Process

Risk assessment and oversight are an integral part of our governance and management processes. Our board of directors encourages management to promote a culture that incorporates risk management into our corporate strategy and day-to-day business operations. Management discusses strategic and operational risks at regular management meetings, and conducts specific strategic planning and review sessions during the year that include a focused discussion and analysis of the risks facing us. Throughout the year, senior management reviews these risks with the board of directors at regular board meetings as part of management presentations that focus on particular business functions, operations or strategies, and presents the steps taken by management to mitigate or eliminate such risks.

Our board of directors does not have a standing risk management committee, but rather administers this oversight function directly through our board of directors as a whole, as well as through various standing committees of our board of directors that address risks inherent in their respective areas of oversight. While our board of directors is responsible for monitoring and assessing strategic risk exposure, our audit committee is responsible for overseeing our major financial risk exposures and the steps our management has taken to monitor and control these exposures. The audit committee also monitors compliance with legal and regulatory requirements and considers and approves or disapproves any related person transactions. Our nominating and corporate governance committee monitors the effectiveness of our corporate governance guidelines. Our compensation committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking.

Board Committees

Audit Committee

Our audit committee oversees our corporate accounting and financial reporting process. Among other matters, the audit committee:

- appoints our independent registered public accounting firm;
- evaluates the independent registered public accounting firm's qualifications, independence and performance;
- determines the engagement of the independent registered public accounting firm;
- reviews and approves the scope of the annual audit and the audit fee;
- discusses with management and the independent registered public accounting firm the results of the annual audit and the review of our quarterly financial statements;
- approves the retention of the independent registered public accounting firm to perform any proposed permissible non-audit services;
- monitors the rotation of partners of the independent registered public accounting firm on our engagement team in accordance with requirements established by the SEC;
- is responsible for reviewing our financial statements and our management's discussion and analysis of financial condition and results of operations to be included in our annual and quarterly reports to be filed with the SEC;
- reviews our critical accounting policies and estimates;
- reviews all related party transactions on an ongoing basis;
- establishes procedures for the receipt, retention and treatment of complaints received by us regarding accounting, internal controls or auditing matters;
- annually reviews and assesses treasury functions including cash management process;
- discusses on a periodic basis, or as appropriate, with management, our policies and procedures with respect to risk assessment; and
- investigates any matters received, and reports to the Board periodically, with respect to ethics issues, complaints and associated investigations; and
- reviews the audit committee charter and the committee's performance at least annually.

The current members of our audit committee are Messrs. Krognés, Simon and Svenilson. Mr. Krognés serves as the chairperson of the committee. All members of our audit committee meet the requirements for financial literacy under the applicable rules and regulations of the SEC and The Nasdaq Global Market. Our board of directors has determined that Mr. Krognés is an audit committee financial expert as defined under the applicable rules of the SEC and has the requisite financial sophistication as defined under the applicable rules and regulations of The Nasdaq Global Market. Under the rules of the SEC, members of the audit committee must also meet heightened independence standards. Our board of directors has determined that each of the members of our audit committee are independent under the applicable rules of the SEC and The Nasdaq Global Market. The audit committee operates under a written charter that satisfies the applicable standards of the SEC and The Nasdaq Global Market.

Compensation Committee

Our compensation committee oversees policies relating to compensation and benefits of our officers and employees. The compensation committee reviews and approves or recommends

corporate goals and objectives relevant to compensation of our executive officers (other than our Chief Executive Officer), evaluates the performance of these officers in light of those goals and objectives and approves the compensation of these officers based on such evaluations. The compensation committee also reviews and approves or makes recommendations to our board of directors regarding the issuance of stock options and other awards under our stock plans to our executive officers (other than our Chief Executive Officer). The compensation committee reviews the performance of our Chief Executive Officer and makes recommendations to our board of directors with respect to his compensation and our board of directors retains the authority to make compensation decisions relative to our Chief Executive Officer. The compensation committee will review and evaluate, at least annually, the performance of the compensation committee and its members, including compliance by the compensation committee with its charter. The current members of our compensation committee are Drs. Woiwode and Heyman and Mr. Krognos. Dr. Woiwode serves as the chairman of the committee. Each of the members of our compensation committee is independent under the applicable rules and regulations of The Nasdaq Global Market, is a “non-employee director” as defined in Rule 16b-3 promulgated under the Exchange Act and is an “outside director” as that term is defined in Section 162(m) of the U.S. Internal Revenue Code of 1986, as amended, or Section 162(m). The compensation committee operates under a written charter that satisfies the applicable standards of the SEC and The Nasdaq Global Market.

Nominating and Corporate Governance Committee

The nominating and corporate governance committee is responsible for making recommendations to our board of directors regarding candidates for directorships and the size and composition of our board of directors. In addition, the nominating and corporate governance committee is responsible for overseeing our corporate governance policies and reporting and making recommendations to our board of directors concerning governance matters. The current members of our nominating and corporate governance committee are Drs. Heyman and Woiwode and Ms. Li. Ms. Li serves as the chairman of the committee. Each of the members of our nominating and corporate governance committee is an independent director under the applicable rules and regulations of The Nasdaq Global Market relating to nominating and corporate governance committee independence. The nominating and corporate governance committee operates under a written charter that satisfies the applicable standards of the SEC and The Nasdaq Global Market.

Compensation Committee Interlocks and Insider Participation

During the year ended December 31, 2017, our compensation committee consisted of Dr. Woiwode and Patrick Mahaffy, a former member of our board of directors. None of the members of our compensation committee during 2017 nor any of the current members of our compensation committee has at any time been one of our officers or employees. None of our executive officers currently serves, or in the past fiscal year has served, as a member of the board of directors or compensation committee of any entity that has one or more executive officers on our board of directors or compensation committee.

Board Diversity

Upon consummation of this offering, our nominating and corporate governance committee will be responsible for reviewing with the board of directors, on an annual basis, the appropriate characteristics, skills and experience required for the board of directors as a whole and its individual members. In evaluating the suitability of individual candidates (both new candidates and current members), the nominating and corporate governance committee, in recommending candidates for

election, and the board of directors, in approving (and, in the case of vacancies, appointing) such candidates, may take into account many factors, including but not limited to the following:

- personal and professional integrity;
- ethics and values;
- experience in corporate management, such as serving as an officer or former officer of a publicly held company;
- experience in the industries in which we compete;
- experience as a board member or executive officer of another publicly held company;
- diversity of expertise and experience in substantive matters pertaining to our business relative to other board members;
- conflicts of interest; and
- practical and mature business judgment.

Currently, our board of directors evaluates, and following the consummation of this offering will evaluate, each individual in the context of the board of directors as a whole, with the objective of assembling a group that can best maximize the success of the business and represent stockholder interests through the exercise of sound judgment using its diversity of experience in these various areas.

Code of Business Conduct and Ethics

Prior to the consummation of this offering, we will adopt a code of business conduct and ethics that will apply to all of our employees, officers and directors, including those officers responsible for financial reporting. Following the consummation of this offering, the code of business conduct and ethics will be available on our website. We expect that any amendments to the code, or any waivers of its requirements, will be disclosed on our website.

Limitation on Liability and Indemnification Matters

Our amended and restated certificate of incorporation, which will become effective immediately prior to the consummation of this offering, will contain provisions that limit the liability of our directors for monetary damages to the fullest extent permitted by Delaware law. Consequently, our directors will not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- any transaction from which the director derived an improper personal benefit.

Each of our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective immediately prior to the consummation of this offering, will provide that we are required to indemnify our directors and officers, in each case to the fullest extent permitted by Delaware law. Our amended and restated bylaws will also obligate us to advance expenses incurred

by a director or officer in advance of the final disposition of any action or proceeding, and permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in that capacity regardless of whether we would otherwise be permitted to indemnify him or her under Delaware law. We have entered and expect to continue to enter into agreements to indemnify our directors, executive officers and other employees as determined by our board of directors. With specified exceptions, these agreements provide for indemnification for related expenses including, among other things, attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. We also maintain directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against our directors and officers for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and our stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage.

Director Compensation

Historically, we have not had a formalized non-employee director compensation program; however, in 2017, we paid each of Richard Heyman, Ph.D. and Patrick Mahaffy, a former member of our board of directors, an annual retainer of \$48,000 pursuant to offer letters entered into with them in connection with their commencement of service on our board of directors in 2015. We also granted each of Dr. Heyman and Mr. Mahaffy options to purchase our common stock in connection with their commencement of service with us. Each of our other non-employee directors is associated with one of our principal investors and is not compensated for service on our board of directors. In addition, we reimburse our non-employee directors for travel and other necessary business expenses incurred in the performance of their services for us.

2017 Director Compensation Table

<u>Name</u>	<u>Fees Earned or Paid in Cash (\$)</u>	<u>Option Awards \$(1)</u>	<u>Total (\$)</u>
Richard Heyman, Ph.D.	48,000	—	48,000
Judith Li	—	—	—
Patrick Mahaffy(2)	48,000	—	48,000
Nicholas Simon	—	—	—
Peter Svenilson	—	—	—
Thomas Woiwode, Ph.D.	—	—	—

(1) As of December 31, 2017, Dr. Heyman and Mr. Mahaffy held 181,820 and 446,995 shares of our common stock, respectively, subject to repurchase at the original purchase price thereof in the event their service were to terminate with us. These shares were acquired upon exercise of stock options prior to vesting.

(2) In May 2018, Mr. Mahaffy resigned from our board of directors.

We intend to approve and implement a compensation policy for our non-employee directors, or the Director Compensation Program, to be effective in connection with the consummation of this offering. Pursuant to the Director Compensation Program, our non-employee directors will receive cash compensation as follows:

- Each non-employee director will receive an annual cash retainer in the amount of \$35,000 per year.

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- The Independent Chairperson will receive an additional annual cash retainer in the amount of \$30,000 per year.
- The chairperson of the audit committee will receive additional annual cash compensation in the amount of \$15,000 per year for such chairperson's service on the audit committee. Each non-chairperson member of the audit committee will receive additional annual cash compensation in the amount of \$7,500 per year for such member's service on the audit committee.
- The chairperson of the compensation committee will receive additional annual cash compensation in the amount of \$10,000 per year for such chairperson's service on the compensation committee. Each non-chairperson member of the compensation committee will receive additional annual cash compensation in the amount of \$5,000 per year for such member's service on the compensation committee.
- The chairperson of the nominating and corporate governance committee will receive additional annual cash compensation in the amount of \$8,000 per year for such chairperson's service on the nominating and corporate governance committee. Each non-chairperson member of the nominating and corporate governance committee will receive additional annual cash compensation in the amount of \$4,000 per year for such member's service on the nominating and corporate governance committee.

Under the Director Compensation Program, each non-employee director will automatically be granted an option to purchase 110,000 shares of our common stock upon the director's initial appointment or election to our board of directors, referred to as the Initial Grant, and an option to purchase 55,000 shares of our common stock automatically on the date of each annual stockholder's meeting thereafter, referred to as the Annual Grant. The Initial Grant will vest in substantially equal monthly installments for three years from the date of grant, subject to continued service through each applicable vesting date. The Annual Grant will vest on the earlier of the first anniversary of the date of grant or the date of the next annual stockholder's meeting to the extent unvested as of such date, subject to continued service through each applicable vesting date.

EXECUTIVE COMPENSATION

This section discusses the material components of the executive compensation program for our executive officers who are named in the “2017 Summary Compensation Table” below. In 2017, our “named executive officers” and their positions were as follows:

- Andrew Allen, M.D., Ph.D., President and Chief Executive Officer;
- Karin Jooss, Ph.D., Executive Vice President and Chief Scientific Officer; and
- Raphaël Rousseau, M.D., Executive Vice President and Chief Medical Officer.

This discussion may contain forward-looking statements that are based on our current plans, considerations, expectations and determinations regarding future compensation programs. Actual compensation programs that we adopt following the completion of this offering may differ materially from the currently planned programs summarized in this discussion. As an “emerging growth company” as defined in the JOBS Act, we are not required to include a Compensation Discussion and Analysis section and have elected to comply with the scaled disclosure requirements applicable to emerging growth companies.

2017 Summary Compensation Table

The following table sets forth information concerning the compensation of our named executive officers for the year ended December 31, 2017.

<u>Name and Principal Position</u>	<u>Year</u>	<u>Salary (\$)</u>	<u>Option Awards (\$)(1)</u>	<u>Non-Equity Incentive Plan Compensation (\$)(2)</u>	<u>All Other Compensation (\$)(3)</u>	<u>Total</u>
Andrew Allen, M.D., Ph.D. <i>President and Chief Executive Officer</i>	2017	435,625	—	156,825	—	592,450
Karin Jooss, Ph.D. <i>EVP and Chief Scientific Officer</i>	2017	369,000	—	116,235	18,982	504,217
Raphaël Rousseau, M.D., Ph.D.(4) <i>EVP and Chief Medical Officer</i>	2017	283,334	286,137	89,250	11,896	670,617

- (1) Amounts reflect the full grant-date fair value of stock options granted during 2017 computed in accordance with ASC Topic 718, rather than the amounts paid to or realized by the named individual. See Note 10 of the audited financial statements included in this prospectus for the assumptions used in calculating these amounts.
- (2) Amounts represent the annual performance-based cash bonuses earned by our named executive officers based on the achievement of certain corporate performance objectives during 2017. These amounts were paid to the named executive officers in early 2018. Please see the descriptions of the annual performance bonuses paid to our named executive officers under “2017 Bonuses” below.
- (3) Amount reported for Dr. Jooss represents \$12,537 of reimbursed commuting expenses and \$6,445 paid to reimburse taxes incurred in connection with such reimbursement. Amount reported for Dr. Rousseau represents \$7,120 of reimbursed attorney fees incurred in connection with the negotiation of his offer letter and \$4,776 paid to reimburse taxes incurred in connection with such reimbursement.
- (4) Dr. Rousseau commenced employment with us on April 17, 2017.

Narrative to Summary Compensation Table

2017 Salaries

Our named executive officers each receive a base salary to compensate them for services rendered to our company. The base salary payable to each named executive officer is intended to

provide a fixed component of compensation reflecting the executive's skill set, experience, role and responsibilities.

For fiscal year 2017, Dr. Allen's annual base salary was \$437,750, Dr. Jooss's base salary was \$370,800, and Dr. Rousseau's base salary was \$400,000. The annual base salaries of Dr. Allen and Dr. Jooss were increased 3% from their respective levels in 2016, and Dr. Rousseau's base salary was determined by the Board as a result of negotiations in connection with his commencement of employment with us in April 2017. In early 2018, the Board approved the following base salaries for our named executive officers, effective March 1, 2018: for Dr. Allen, \$475,000; for Dr. Jooss, \$381,924; and for Dr. Rousseau, \$412,000.

2017 Bonuses

We maintain an annual performance-based cash bonus program in which each of our named executive officers participated in 2017. Each named executive officer's target bonus is expressed as a percentage of base salary which can be achieved by meeting corporate goals at target level. The 2017 annual bonuses for Dr. Allen, Dr. Jooss and Dr. Rousseau were targeted at 40%, 35% and 35% of their respective base salaries. Dr. Allen's and Dr. Jooss's target bonuses remained unchanged from their respective 2016 levels, and Dr. Rousseau's target bonus was determined by the Board as a result of negotiations in connection with his commencement of employment with us in April 2017.

For 2017, our named executive officers were eligible to earn annual cash bonuses based on the achievement of certain corporate performance objectives approved by the Compensation Committee and the Board. In early 2018, the Board reviewed and approved the achievement of our 2017 corporate goals at 90%. Based on this level of achievement, our named executive officers were paid performance bonuses at 90% of their targeted amounts.

The actual annual cash bonuses awarded to each named executive officer for 2017 performance are set forth above in the Summary Compensation Table in the column titled "Non-Equity Incentive Plan Compensation." Dr. Rousseau's annual bonus was based on his actual base salary earnings for 2017.

Equity Compensation

In May 2017, pursuant to his offer letter with us dated November 15, 2016, the Board granted Dr. Rousseau an option to purchase 1,140,750 shares of our common stock pursuant to our 2015 Equity Incentive Plan. The option vests as to 25% of the shares underlying the option on the first anniversary of Dr. Rousseau's employment commencement date, and as to 1/48th of the shares underlying the option on each monthly anniversary thereafter, subject to Dr. Rousseau's continued service to the Company on each applicable vesting date. In addition, the option is subject to the accelerated vesting provision set forth in Dr. Rousseau's offer letter, as described below under "Executive Compensation Arrangements."

Drs. Allen and Jooss were not granted equity awards in 2017.

We intend to adopt a 2018 Incentive Award Plan, referred to below as the 2018 Plan, in order to facilitate the grant of cash and equity incentives to directors, employees (including our named executive officers) and consultants of our company and certain of its affiliates and to enable us to obtain and retain services of these individuals, which is essential to our long-term success. We expect that the 2018 Plan will be effective on the date on which it is adopted by our board of directors, subject to approval of such plan by our stockholders. For additional information about the 2018 Plan, please see the section titled "Equity Incentive Plans" below.

Other Elements of Compensation

Retirement Savings and Health and Welfare Benefits

We maintain a 401(k) retirement savings plan for our employees, including our named executive officers, who satisfy certain eligibility requirements. Our named executive officers are eligible to participate in the 401(k) plan on the same terms as other full-time employees. Currently, we may match (in our discretion) contributions made by participants in the 401(k) plan in the amount equal to 50% of up to 4% of the participant's eligible compensation contributed to the plan, not to exceed 2% of a participant's eligible compensation. We believe that providing a vehicle for tax-deferred retirement savings through our 401(k) plan adds to the overall desirability of our executive compensation package and further incentivizes our employees, including our named executive officers, in accordance with our compensation policies.

All of our full-time employees, including our named executive officers, are eligible to participate in our health and welfare plans, including medical, dental and vision benefits; medical and dependent care flexible spending accounts; short-term and long-term disability insurance; and life and AD&D insurance.

Perquisites and Other Personal Benefits

We provide limited perquisites to our named executive officers when our compensation committee determines that such perquisites are necessary or advisable to fairly compensate or incentivize our employees. In 2017, we reimbursed expenses incurred by Dr. Jooss in commuting from her home in San Diego, California to our headquarters in Emeryville, California. We also reimbursed legal expenses incurred by Dr. Rousseau in negotiating his offer letter.

Outstanding Equity Awards at Fiscal Year-End

The following table summarizes the number of shares of common stock underlying outstanding equity awards for each named executive officer as of December 31, 2017.

Name	Grant Date	Option Awards				Stock Awards	
		Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested (\$)(4)
Andrew Allen, M.D., Ph.D.	9/4/2015(1)	—	—	—	—	4,166,667	
Karin Jooss, Ph.D.	4/15/2016(2)	—	—	—	—	1,295,584	
Raphaël Rousseau, M.D, Ph.D.	5/18/2017(3)	—	1,140,750	0.11	5/17/2027	—	

- (1) Dr. Allen acquired 10,000,000 restricted shares of our common stock pursuant to a founder stock purchase agreement. The restricted shares vest and our repurchase right lapses in respect of 12.5% of the total shares on the six month anniversary of the vesting commencement date (August 1, 2015), and in respect of 1/48th of the total shares monthly thereafter, subject to Dr. Allen's continued service with us through each vesting date.
- (2) Represents restricted shares acquired upon early exercise of a stock option covering 2,221,000 shares of our common stock. The restricted shares vest and our repurchase right lapses in respect of 25% of the total shares on the first anniversary of the vesting commencement date (April 15, 2016), and in respect of 1/48th of the total shares monthly thereafter, subject to Dr. Jooss's continued service with us through each vesting date.

- date. The restricted shares are subject to the vesting acceleration provision set forth in Dr. Jooss's offer letter, as described below under "Equity Compensation Arrangements."
- (3) The option vests in respect of 25% of the underlying shares on the first anniversary of the vesting commencement date (April 17, 2017), and in respect of 1/48th of the underlying shares monthly thereafter, subject to Dr. Rousseau's continued service with us through each vesting date. The option is subject to the vesting acceleration provision set forth in Dr. Rousseau's offer letter, as described below under "Equity Compensation Arrangements."
- (4) The market value of our common stock is based upon the assumed initial public offering price of \$ per share, which is the midpoint of the range set forth on the cover of this prospectus.

Executive Compensation Arrangements

As of December 31, 2017, we were party to offer letters with each of our named executive officers.

Dr. Allen. We entered into an offer letter with Dr. Allen on October 7, 2015 in connection with his appointment as our President and Chief Executive Officer, which sets forth his initial base salary and benefit plan participation.

Dr. Jooss. We entered into an offer letter with Dr. Jooss on February 29, 2016 in connection with her appointment as Executive Vice President and Chief Scientific Officer, which sets forth her initial base salary, annual bonus opportunity, benefit plans participation, initial equity award, and a \$30,000 signing bonus that was paid in April 2016. The offer letter provides for an initial stock option grant covering 2,221,000 shares of our common stock, which was granted in April 2016.

Under Dr. Jooss's offer letter, if she is terminated without "cause" or resigns for "good reason" (as each is defined in the offer letter), she will be eligible to receive six months of continued base salary (and up to nine months of base salary if the Company fails to give 90 days' advance written notice to Dr. Jooss prior to any such termination). In addition, if Dr. Jooss is terminated without "cause" or resigns for "good reason" within the period commencing three months prior to and ending 12 months following a change in control, then she will be entitled to receive: (i) one year of continued base salary and (ii) full vesting acceleration of all then-outstanding equity awards. The foregoing severance benefits are subject to Dr. Jooss's execution and non-revocation of a general release of claims against the Company.

Dr. Rousseau. We entered into an offer letter with Dr. Rousseau on November 15, 2016 in connection with his appointment as Executive Vice President and Chief Medical Officer, which sets forth his initial base salary, annual bonus opportunity, benefit plans participation, and initial equity awards. The offer letter provides for an initial stock option grant covering 1,140,750 shares of our common stock, which was granted in May 2017.

Under Dr. Rousseau's offer letter, if he is terminated without "cause," resigns for "good reason" (as each is defined in the offer letter), or his employment ends due to death or permanent disability, he will be eligible to receive: (i) 12 months of continued base salary, (ii) a pro-rated annual bonus calculated at 100% of target, and (iii) up to 12 months of continued healthcare coverage reimbursements. In addition, if Dr. Rousseau is terminated without "cause" or resigns for "good reason" within the period commencing three months prior to the Company entering into a definitive agreement for a change in control and ending 12 months following a change in control, then he will be entitled to receive (i) one year of continued base salary, (ii) a pro-rated annual bonus plus a full annual bonus, each calculated at 100% of target, (iii) up to 12 months of continued healthcare coverage, and (iv) full vesting acceleration of all then-outstanding equity awards. The foregoing severance benefits are subject to Dr. Rousseau's execution and non-revocation of a general release of claims against the Company.

Equity Compensation Plans

The following summarizes the material terms of the long-term incentive compensation plan in which our named executive officers will be eligible to participate following the consummation of this offering and our 2015 Equity Incentive Plan, referred to as the 2015 Plan, under which we have previously made periodic grants of equity and equity-based awards to our named executive officers and other key employees.

2018 Incentive Award Plan

We intend to adopt the 2018 Incentive Award Plan, or 2018 Plan, which will be effective on the day prior to the first public trading date of our common stock. The principal purpose of the 2018 Plan is to attract, retain and motivate selected employees, consultants and directors through the granting of stock-based compensation awards and cash-based performance bonus awards. The material terms of the 2018 Plan, as it is currently contemplated, are summarized below.

Share Reserve. Under the 2018 Plan, _____ shares of our common stock will be initially reserved for issuance pursuant to a variety of stock-based compensation awards, including stock options, stock appreciation rights, or SARs, restricted stock awards, restricted stock unit awards and other stock-based awards, plus the number of shares remaining available for future awards under the 2015 Plan, as of the effective date of the 2018 Plan. The number of shares initially reserved for issuance or transfer pursuant to awards under the 2018 Plan will be increased by (i) the number of shares represented by awards outstanding under our 2015 Plan that are forfeited or lapse unexercised and which following the effective date are not issued under our 2015 Plan and (ii) an annual increase on the first day of each fiscal year beginning in 2019 and ending in 2028, equal to the lesser of (A) _____ % of the shares of stock outstanding (on an as converted basis) on the last day of the immediately preceding fiscal year and (B) such smaller number of shares of stock as determined by our board of directors; provided, however, that no more than _____ shares of stock may be issued upon the exercise of incentive stock options.

The following counting provisions will be in effect for the share reserve under the 2018 Plan:

- to the extent that an award terminates, expires or lapses for any reason or an award is settled in cash without the delivery of shares, any shares subject to the award at such time will be available for future grants under the 2018 Plan;
- to the extent shares are tendered or withheld to satisfy the grant, exercise price or tax withholding obligation with respect to any award under the 2018 Plan, such tendered or withheld shares will be available for future grants under the 2018 Plan;
- to the extent shares subject to stock appreciation rights are not issued in connection with the stock settlement of stock appreciation rights on exercise thereof, such shares will be available for future grants under the 2018 Plan;
- to the extent that shares of our common stock are repurchased by us prior to vesting so that shares are returned to us, such shares will be available for future grants under the 2018 Plan;
- the payment of dividend equivalents in cash in conjunction with any outstanding awards will not be counted against the shares available for issuance under the 2018 Plan; and
- to the extent permitted by applicable law or any exchange rule, shares issued in assumption of, or in substitution for, any outstanding awards of any entity acquired in any form of combination by us or any of our subsidiaries will not be counted against the shares available for issuance under the 2018 Plan.

Administration. The compensation committee of our board of directors is expected to administer the 2018 Plan unless our board of directors assumes authority for administration. The compensation committee must consist of at least three members of our board of directors, each of whom is intended to qualify as a “non-employee director” for purposes of Rule 16b-3 under the Exchange Act and an “independent director” within the meaning of the rules of the applicable stock exchange, or other principal securities market on which shares of our common stock are traded. The 2018 Plan provides that the board or compensation committee may delegate its authority to grant awards to employees other than executive officers and certain senior executives of the company to a committee consisting of one or more members of our board of directors or one or more of our officers, other than awards made to our non-employee directors, which must be approved by our full board of directors.

Subject to the terms and conditions of the 2018 Plan, the administrator has the authority to select the persons to whom awards are to be made, to determine the number of shares to be subject to awards and the terms and conditions of awards, and to make all other determinations and to take all other actions necessary or advisable for the administration of the 2018 Plan. The administrator is also authorized to adopt, amend or rescind rules relating to administration of the 2018 Plan. Our board of directors may at any time remove the compensation committee as the administrator and re-vest in itself the authority to administer the 2018 Plan. The full board of directors will administer the 2018 Plan with respect to awards to non-employee directors.

Eligibility. Options, SARs, restricted stock and all other stock-based and cash-based awards under the 2018 Plan may be granted to individuals who are then our officers, employees or consultants or are the officers, employees or consultants of certain of our subsidiaries. Such awards also may be granted to our directors. Only employees of our company or certain of our subsidiaries may be granted incentive stock options, or ISOs.

Awards. The 2018 Plan provides that the administrator may grant or issue stock options, SARs, restricted stock, restricted stock units, other stock- or cash-based awards and dividend equivalents, or any combination thereof. Each award will be set forth in a separate agreement with the person receiving the award and will indicate the type, terms and conditions of the award.

- *Nonstatutory Stock Options*, or NSOs, will provide for the right to purchase shares of our common stock at a specified price which may not be less than fair market value on the date of grant, and usually will become exercisable (at the discretion of the administrator) in one or more installments after the grant date, subject to the participant’s continued employment or service with us and/or subject to the satisfaction of corporate performance targets and individual performance targets established by the administrator. NSOs may be granted for any term specified by the administrator that does not exceed ten years.
- *Incentive Stock Options*, or ISOs, will be designed in a manner intended to comply with the provisions of Section 422 of the Code and will be subject to specified restrictions contained in the Code. Among such restrictions, ISOs must have an exercise price of not less than the fair market value of a share of common stock on the date of grant, may only be granted to employees, and must not be exercisable after a period of ten years measured from the date of grant. In the case of an ISO granted to an individual who owns (or is deemed to own) at least 10% of the total combined voting power of all classes of our capital stock, the 2018 Plan provides that the exercise price must be at least 110% of the fair market value of a share of common stock on the date of grant and the ISO must not be exercisable after a period of five years measured from the date of grant.
- *Restricted Stock* may be granted to any eligible individual and made subject to such restrictions as may be determined by the administrator. Restricted stock, typically, may be forfeited for no consideration or repurchased by us at the original purchase price if the conditions or

restrictions on vesting are not met. In general, restricted stock may not be sold or otherwise transferred until restrictions are removed or expire. Purchasers of restricted stock, unlike recipients of options, will have voting rights and will have the right to receive dividends, if any, prior to the time when the restrictions lapse, however, extraordinary dividends will generally be placed in escrow, and will not be released until restrictions are removed or expire.

- *Restricted Stock Units* may be awarded to any eligible individual, typically without payment of consideration, but subject to vesting conditions based on continued employment or service or on performance criteria established by the administrator. Like restricted stock, restricted stock units may not be sold, or otherwise transferred or hypothecated, until vesting conditions are removed or expire. Unlike restricted stock, stock underlying restricted stock units will not be issued until the restricted stock units have vested, and recipients of restricted stock units generally will have no voting or dividend rights prior to the time when vesting conditions are satisfied.
- *Stock Appreciation Rights*, or SARs, may be granted in connection with stock options or other awards, or separately. SARs granted in connection with stock options or other awards typically will provide for payments to the holder based upon increases in the price of our common stock over a set exercise price. The exercise price of any SAR granted under the 2018 Plan must be at least 100% of the fair market value of a share of our common stock on the date of grant. SARs under the 2018 Plan will be settled in cash or shares of our common stock, or in a combination of both, at the election of the administrator.
- *Other Stock or Cash Based Awards* are awards of cash, fully vested shares of our common stock and other awards valued wholly or partially by referring to, or otherwise based on, shares of our common stock. Other stock or cash based awards may be granted to participants and may also be available as a payment form in the settlement of other awards, as standalone payments and as payment in lieu of base salary, bonus, fees or other cash compensation otherwise payable to any individual who is eligible to receive awards. The plan administrator will determine the terms and conditions of other stock or cash based awards, which may include vesting conditions based on continued service, performance and/or other conditions.
- *Dividend Equivalents* represent the right to receive the equivalent value of dividends paid on shares of our common stock and may be granted alone or in tandem with awards other than stock options or SARs. Dividend equivalents are credited as of dividend payments dates during the period between a specified date and the date such award terminates or expires, as determined by the plan administrator. In addition, dividend equivalents with respect to shares covered by a performance award will only be paid to the participant at the same time or times and to the same extent that the vesting conditions, if any, are subsequently satisfied and the performance award vests with respect to such shares.

Any award may be granted as a performance award, meaning that the award will be subject to vesting and/or payment based on the attainment of specified performance goals.

Change in Control. In the event of a change in control, unless the plan administrator elects to terminate an award in exchange for cash, rights or other property, or cause an award to accelerate in full prior to the change in control, such award will continue in effect or be assumed or substituted by the acquirer, provided that any performance-based portion of the award will be subject to the terms and conditions of the applicable award agreement. In the event the acquirer refuses to assume or replace awards granted, prior to the consummation of such transaction, awards issued under the 2018 Plan will be subject to accelerated vesting such that 100% of such awards will become vested and exercisable or payable, as applicable. The administrator may also make appropriate adjustments to awards under the 2018 Plan and is authorized to provide for the acceleration, cash-out, termination, assumption, substitution or conversion of such awards in the event of a change in control or certain other unusual or nonrecurring events or transactions.

Adjustments of Awards. In the event of any stock dividend or other distribution, stock split, reverse stock split, reorganization, combination or exchange of shares, merger, consolidation, split-up, spin-off, recapitalization, repurchase or any other corporate event affecting the number of outstanding shares of our common stock or the share price of our common stock that would require adjustments to the 2018 Plan or any awards under the 2018 Plan in order to prevent the dilution or enlargement of the potential benefits intended to be made available thereunder, the administrator will make appropriate, proportionate adjustments to: (i) the aggregate number and type of shares subject to the 2018 Plan; (ii) the number and kind of shares subject to outstanding awards and terms and conditions of outstanding awards (including, without limitation, any applicable performance targets or criteria with respect to such awards); and (iii) the grant or exercise price per share of any outstanding awards under the 2018 Plan.

Amendment and Termination. The administrator may terminate, amend or modify the 2018 Plan at any time and from time to time. However, we must generally obtain stockholder approval to the extent required by applicable law, rule or regulation (including any applicable stock exchange rule). Notwithstanding the foregoing, an option may be amended to reduce the per share exercise price below the per share exercise price of such option on the grant date and options may be granted in exchange for, or in connection with, the cancellation or surrender of options having a higher per share exercise price without receiving additional stockholder approval.

No incentive stock options may be granted pursuant to the 2018 Plan after the tenth anniversary of the effective date of the 2018 Plan, and no additional annual share increases to the 2018 Plan's aggregate share limit will occur from and after such anniversary. Any award that is outstanding on the termination date of the 2018 Plan will remain in force according to the terms of the 2018 Plan and the applicable award agreement.

2015 Equity Incentive Plan

Our board of directors adopted, and our stockholders approved, the 2015 Plan effective as of August 28, 2015, which was subsequently amended to increase the number of shares issuable under the 2015 Plan. As of August 20, 2018, under the 2015 Plan, there were outstanding options to purchase 16,395,414 shares of our common stock at a weighted-average exercise price per share of \$0.57 and 7,297,489 outstanding shares of common stock, and there were 640,429 shares of common stock reserved for issuance pursuant to future awards. Following this offering and in connection with the effectiveness of our 2018 Plan, the 2015 Plan will terminate and no further awards will be granted under the 2015 Plan. However, all outstanding awards will continue to be governed by their existing terms.

Administration. Our board of directors, the compensation committee or another committee thereof appointed by our board of directors, has the authority to administer the 2015 Plan and the awards granted under it. The administrator has the authority to select the service providers to whom awards will be granted under the 2015 Plan, the number of shares to be subject to those awards under the 2015 Plan, and the terms and conditions of the awards granted. In addition, the administrator has the authority to construe and interpret the 2015 Plan and to adopt rules for the administration, interpretation and application of the 2015 Plan that are consistent with the terms of the 2015 Plan.

Awards. The 2015 Plan provides that the administrator may grant or issue options, including ISOs and NSOs, and stock purchase rights to employees, consultants and directors; provided that only employees may be granted ISOs.

- *Stock Options.* The 2015 Plan provides for the grant of ISOs or NSOs. ISOs may be granted only to employees. NSOs may be granted to employees, directors or consultants. The exercise

price of ISOs granted to employees who at the time of grant own stock representing more than 10% of the voting power of all classes of our common stock may not be less than 110% of the fair market value per share of our common stock on the date of grant, and the exercise price of ISOs granted to any other employees may not be less than 100% of the fair market value per share of our common stock on the date of grant. The exercise price of NSOs to employees, directors or consultants may not be less than 100% of the fair market value per share of our common stock on the date of grant.

- *Stock Purchase Rights.* The 2015 Plan provides for the grant of stock purchase rights. Each stock purchase right that is accepted will be governed by a restricted stock purchase agreement, which will detail the restrictions on transferability, risk of forfeiture and other restrictions the administrator approves. In general, restricted stock acquired upon exercise of a stock purchase right may not be sold, transferred, pledged, hypothecated, margined or otherwise encumbered until restrictions are removed or expire. Holders of restricted stock, unlike recipients of stock options, will have voting rights and will have the right to receive dividends, if any, prior to the time when the restrictions lapse.

Adjustments of Awards. In the event of any dividend or other distribution, recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, exchange of shares or other change in the corporate structure of the Company affecting shares of common stock, the administrator will make adjustments to the number and class of shares available for issuance under the 2015 Plan and the number, class and price of shares subject to outstanding awards.

Change in Control. In the event of a merger or change in control, the administrator has discretion to determine the treatment of each outstanding award, and may provide that the awards will be assumed or substituted, that the awards will terminate or accelerate in full immediately prior to the change in control or that awards will terminate in exchange for cash or other property. In addition, in the event of a change in control where the acquirer does not assume or replace awards granted, prior to the consummation of such transaction, awards issued under the 2015 Plan will accelerate in full.

Amendment and Termination. Our board of directors may amend or terminate the 2015 Plan or any portion thereof at any time. However, no amendment may impair the rights of a holder of an outstanding award without the holder's consent, and any action by our board of directors to increase the number of shares subject to the plan or extend the term of the plan is subject to the approval of our stockholders. Additionally, an amendment of the plan shall be subject to the approval of our stockholders, where such approval by our stockholders of an amendment is required by applicable law. Following this offering and in connection with the effectiveness of our 2018 Plan, the 2015 Plan will terminate and no further awards will be granted under the 2015 Plan.

2018 Employee Stock Purchase Plan

We intend to adopt and ask our stockholders to approve the 2018 Employee Stock Purchase Plan, which we refer to as our ESPP, which will be effective on the day prior to the first public trading date of our common stock. The ESPP is designed to allow our eligible employees to purchase shares of our common stock, at semi-annual intervals, with their accumulated payroll deductions. The ESPP is intended to qualify under Section 423 of the Code. The material terms of the ESPP, as it is currently contemplated, are summarized below.

Administration. Subject to the terms and conditions of the ESPP, our compensation committee will administer the ESPP. Our compensation committee can delegate administrative tasks under the ESPP to the services of an agent and/or employees to assist in the administration of the ESPP. The

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administrator will have the discretionary authority to administer and interpret the ESPP. Interpretations and constructions of the administrator of any provision of the ESPP or of any rights thereunder will be conclusive and binding on all persons. We will bear all expenses and liabilities incurred by the ESPP administrator.

Share Reserve. The maximum number of our shares of our common stock which will be authorized for sale under the ESPP is equal to the sum of (a) _____ shares of common stock and (b) an annual increase on the first day of each year beginning in 2019 and ending in 2028, equal to the lesser of (i) 1% of the shares of common stock outstanding (on an as converted basis) on the last day of the immediately preceding fiscal year and (ii) such number of shares of common stock as determined by our board of directors; provided, however, no more than _____ shares of our common stock may be issued under the ESPP. The shares reserved for issuance under the ESPP may be authorized but unissued shares or reacquired shares.

Eligibility. Employees eligible to participate in the ESPP for a given offering period generally include employees who are employed by us or one of our subsidiaries on the first day of the offering period, or the enrollment date. Our employees (and, if applicable, any employees of our subsidiaries) who customarily work less than five months in a calendar year or are customarily scheduled to work less than 20 hours per week will not be eligible to participate in the ESPP. Finally, an employee who owns (or is deemed to own through attribution) 5% or more of the combined voting power or value of all our classes of stock or of one of our subsidiaries will not be allowed to participate in the ESPP.

Participation. Employees will enroll under the ESPP by completing a payroll deduction form permitting the deduction from their compensation of at least 1% of their compensation but not more than the lesser of 15% of their compensation or \$50,000. Such payroll deductions may be expressed as either a whole number percentage or a fixed dollar amount, and the accumulated deductions will be applied to the purchase of shares on each purchase date. However, a participant may not purchase more than 15,000 shares in each offering period and may not subscribe for more than \$25,000 in fair market value of shares of our common stock (determined at the time the option is granted) during any calendar year. The ESPP administrator has the authority to change these limitations for any subsequent offering period.

Offering. Under the ESPP, participants are offered the option to purchase shares of our common stock at a discount during a series of successive offering periods, the duration and timing of which will be determined by the ESPP administrator. However, in no event may an offering period be longer than 27 months in length.

The option purchase price will be the lower of 85% of the closing trading price per share of our common stock on the first trading date of an offering period in which a participant is enrolled or 85% of the closing trading price per share on the purchase date, which will occur on the last trading day of each offering period.

Unless a participant has previously canceled his or her participation in the ESPP before the purchase date, the participant will be deemed to have exercised his or her option in full as of each purchase date. Upon exercise, the participant will purchase the number of whole shares that his or her accumulated payroll deductions will buy at the option purchase price, subject to the participation limitations listed above.

A participant may cancel his or her payroll deduction authorization at any time prior to the end of the offering period. Upon cancellation, the participant will have the option to either (i) receive a refund of the participant's account balance in cash without interest or (ii) exercise the participant's option for the current offering period for the maximum number of shares of common stock on the applicable

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purchase date, with the remaining account balance refunded in cash without interest. Following at least one payroll deduction, a participant may also decrease (but not increase) his or her payroll deduction authorization once during any offering period. If a participant wants to increase or decrease the rate of payroll withholding, he or she may do so effective for the next offering period by submitting a new form before the offering period for which such change is to be effective.

A participant may not assign, transfer, pledge or otherwise dispose of (other than by will or the laws of descent and distribution) payroll deductions credited to a participant's account or any rights to exercise an option or to receive shares of our common stock under the ESPP, and during a participant's lifetime, options in the ESPP shall be exercisable only by such participant. Any such attempt at assignment, transfer, pledge or other disposition will not be given effect.

Adjustments upon Changes in Recapitalization, Dissolution, Liquidation, Merger or Asset Sale. In the event of any increase or decrease in the number of issued shares of our common stock resulting from a stock split, reverse stock split, stock dividend, combination or reclassification of the common stock, or any other increase or decrease in the number of shares of common stock effected without receipt of consideration by us, we will proportionately adjust the aggregate number of shares of our common stock offered under the ESPP, the number and price of shares which any participant has elected to purchase under the ESPP and the maximum number of shares which a participant may elect to purchase in any single offering period. If there is a proposal to dissolve or liquidate us, then the ESPP will terminate immediately prior to the consummation of such proposed dissolution or liquidation, and any offering period then in progress will be shortened by setting a new purchase date to take place before the date of our dissolution or liquidation. We will notify each participant of such change in writing at least 10 business days prior to the new exercise date. If we undergo a merger with or into another corporation or sell all or substantially all of our assets, each outstanding option will be assumed or an equivalent option substituted by the successor corporation or the parent or subsidiary of the successor corporation. If the successor corporation refuses to assume the outstanding options or substitute equivalent options, then any offering period then in progress will be shortened by setting a new purchase date to take place before the date of our proposed sale or merger. We will notify each participant of such change in writing at least 10 business days prior to the new exercise date.

Amendment and Termination. Our board of directors may amend, suspend or terminate the ESPP at any time. However, the board of directors may not amend the ESPP without obtaining stockholder approval within 12 months before or after such amendment to the extent required by applicable laws.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

In addition to the compensation arrangements, including employment, termination of employment and change in control arrangements, with our directors and executive officers, including those discussed in the sections titled “Management” and “Executive Compensation,” the following is a description of each transaction since our inception on August 5, 2015 and each currently proposed transaction in which:

- we have been or are to be a participant;
- the amounts involved exceeded or will exceed \$120,000; and
- any of our directors, executive officers or holders of more than 5% of our capital stock, or an affiliate or immediate family member thereof, had or will have a direct or indirect material interest.

Sales and Purchases of Securities

Series A Convertible Preferred Stock Financing

In September 2015 and April 2016, we issued an aggregate of 61,260,000 shares of our Series A convertible preferred stock at a price per share of \$1.00 for aggregate proceeds to us of \$61.3 million. The table below sets forth the number of shares of Series A convertible preferred stock sold to our directors, executive officers or owners of more than 5% of our capital stock, or an affiliate or immediate family member thereof:

<u>Name</u>	<u>Number of Shares of Series A Convertible Preferred Stock</u>	<u>Purchase Price (\$)</u>
Entities affiliated with Versant Ventures(1)	15,000,000	\$ 15,000,000
The Column Group II, LP(2)	15,000,000	\$ 15,000,000
Clarus Lifesciences III, L.P.(3)	10,800,000	\$ 10,800,000
Entities affiliated with Frazier Healthcare Partners(4)	9,000,000	\$ 9,000,000
Entities affiliated with Redmile Group(4)	6,000,000	\$ 6,000,000
Patrick Mahaffy(5)	120,000	\$ 120,000
Roger Allen(6)	90,000	\$ 90,000
Darshan Moroak(6)	27,000	\$ 27,000
Parminder Moroak(6)	30,000	\$ 30,000
Opinder Moroak(6)	12,000	\$ 12,000
Vladimir and Irina Yelensky(7)	30,000	\$ 30,000

- (1) Entities affiliated with Versant Ventures became beneficial owners of (in the aggregate) more than 5% of our capital stock upon the initial closing of the transaction. Thomas Woiwode, Ph.D., who is a member of our board of directors, is an affiliate of Versant Ventures.
- (2) The Column Group II, LP became the beneficial owner of more than 5% of our capital stock upon the initial closing of the transaction. Peter Svenilson, who is a member of our board of directors, is an affiliate of The Column Group II, LP.
- (3) Clarus Lifesciences III, L.P. became the beneficial owner of more than 5% of our capital stock upon the initial closing of the transaction. Nicholas Simon, who is a member of our board of directors, is an affiliate of Clarus Lifesciences III, L.P.
- (4) The purchasers became beneficial owners of (in the aggregate) more than 5% of our capital stock upon the initial closing of the transaction.
- (5) Mr. Mahaffy became a member of our board of directors upon the initial closing of the transaction. In May 2018, Mr. Mahaffy resigned as a member of our board of directors.

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- (6) The purchaser is an immediate family member of Andrew Allen, M.D., Ph.D., who is currently and was at the time of the transaction one of our executive officers and a member of our board of directors.
- (7) The purchaser is an immediate family member of Roman Yelensky, Ph.D., who is currently and was at the time of the transaction one of our executive officers.

Series B Convertible Preferred Stock Financing

In September and October 2017, we issued an aggregate of 61,543,319 shares of our Series B convertible preferred stock at a price per share of \$1.56 for aggregate proceeds to us of \$96.0 million. The table below sets forth the number of shares of Series B convertible preferred stock sold to our directors, executive officers or owners of more than 5% of our capital stock, or an affiliate or immediate family member thereof:

Name	Number of Shares of Series B Convertible Preferred Stock	Purchase Price (\$)
Entities affiliated with Versant Ventures(1)	6,410,256	\$ 10,000,000
The Column Group II, LP(2)	6,410,256	\$ 10,000,000
Clarus Lifesciences III, L.P.(3)	4,615,384	\$ 7,200,000
Entities affiliated with Frazier Healthcare Partners(4)	3,846,153	\$ 6,000,000
Entities affiliated with Lilly Asia Ventures(5)	9,615,383	\$ 15,000,000
Entities affiliated with Redmile Group(4)	2,564,102	\$ 4,000,000
Trinitas Capital G, L.P.(6)	12,820,512	\$ 20,000,000
Patrick Mahaffy(7)	128,205	\$ 200,000
Roger Allen(8)	60,000	\$ 93,600
Darshan Moroak(8)	11,538	\$ 18,000
Parminder Moroak(8)	12,820	\$ 20,000
Opinder Moroak(8)	5,128	\$ 8,000
Vladimir and Irina Yelensky(9)	12,820	\$ 20,000

- (1) Entities affiliated with Versant Ventures beneficially owned (in the aggregate) more than 5% of our capital stock immediately prior to and following the initial closing of the transaction. Dr. Woiwode, who is a member of our board of directors, is an affiliate of Versant Ventures.
- (2) The Column Group II, LP beneficially owned more than 5% of our capital stock immediately prior to and following the initial closing of the transaction. Mr. Svenilson, who is a member of our board of directors, is an affiliate of The Column Group II, LP.
- (3) Clarus Lifesciences III, L.P. beneficially owned more than 5% of our capital stock immediately prior to and following the initial closing of the transaction. Mr. Simon, who is a member of our board of directors, is an affiliate of Clarus Lifesciences III, L.P.
- (4) The purchasers beneficially owned (in the aggregate) more than 5% of our capital stock immediately prior to and following the initial closing of the transaction.
- (5) Entities affiliated with Lilly Asia Ventures became beneficial owners of (in the aggregate) more than 5% of our capital stock upon the initial closing of the transaction. Judith Li, who is a member of our board of directors, is an affiliate of Lilly Asia Ventures.
- (6) The purchaser became the beneficial owner of more than 5% of our capital stock upon the initial closing of the transaction.
- (7) Mr. Mahaffy was at the time of the transaction a member of our board of directors. In May 2018, Mr. Mahaffy resigned as a member of our board of directors.
- (8) The purchaser is an immediate family member of Dr. Allen, who is currently and was at the time of the transaction one of our executive officers and a member of our board of directors.
- (9) The purchaser is an immediate family member of Dr. Yelensky, who is currently and was at the time of the transaction one of our executive officers.

Series C Convertible Preferred Stock Financing

In June, July and August 2018, we issued an aggregate of 11,120,105 shares of our Series C convertible preferred stock at a price per share of \$1.89 for aggregate proceeds to us of approximately \$21.0 million. Of these shares, we sold 1,058,201 shares of Series C convertible preferred stock to entities affiliated with Redmile Group, which beneficially owned more than 5% of our capital stock immediately prior to and following the transaction.

Director and Executive Officer Compensation

Please see “Management—Director Compensation” and “Executive Compensation” for information regarding the compensation of our directors and executive officers.

Employment Agreements

We have entered into employment agreements with our executive officers. For more information regarding these agreements, see “Executive Compensation—Narrative to Summary Compensation Table and Outstanding Equity Awards at Fiscal Year End.”

Indemnification Agreements and Directors’ and Officers’ Liability Insurance

We have entered into or intend to enter into indemnification agreements with each of our directors and executive officers. These agreements will require us to, among other things, indemnify each director and executive officer to the fullest extent permitted by Delaware law, including indemnification of expenses such as attorneys’ fees, judgments, penalties fines and settlement amounts incurred by the director or executive officer in any action or proceeding, including any action or proceeding by or in right of us, arising out of the person’s services as a director or executive officer. We have obtained an insurance policy that insures our directors and officers against certain liabilities, including liabilities arising under applicable securities laws. For additional information see “Management—Limitation of Liability and Indemnification Matters.”

Investors’ Rights Agreements

We entered into an amended and restated investor rights agreement with the purchasers of our outstanding convertible preferred stock, including entities with which certain of our directors are affiliated. As of August 20, 2018, the holders of approximately 133.9 million shares of our common stock, including the shares of common stock issuable upon the conversion of our Series A, Series B and Series C convertible preferred stock, are entitled to rights with respect to the registration of their shares under the Securities Act. For a more detailed description of these registration rights, see “Description of Capital Stock—Registration Rights.” The investor rights agreement also provides for a right of first refusal in favor of certain holders of convertible preferred stock with regard to certain issuances of our capital stock. The rights of first refusal will not apply to, and will terminate upon the consummation of, this offering.

Voting Agreement

We entered into an amended and restated voting agreement with certain holders of our common stock and convertible preferred stock. Upon the consummation of this offering, the amended and restated voting agreement will terminate. For a description of the amended and restated voting agreement, see “Management—Board Composition—Voting Arrangements.”

Right of First Refusal and Co-Sale Agreement

We entered into an amended and restated right of first refusal and co-sale agreement with certain holders of our common stock and convertible preferred stock. This agreement provides for rights of first refusal and co-sale relating to the shares of our common stock held by the parties to the agreement. Upon the consummation of this offering, the amended and restated right of first refusal and co-sale agreement will terminate.

Policies and Procedures for Related Party Transactions

Prior to the consummation of this offering, our board of directors will adopt a written related person transaction policy, to be effective upon the consummation of this offering, setting forth the policies and procedures for the review and approval or ratification of related person transactions. This policy will cover, with certain exceptions set forth in Item 404 of Regulation S-K under the Securities Act, any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships in which we were or are to be a participant, where the amount involved exceeds \$120,000 and a related person had or will have a direct or indirect material interest, including without limitation purchases of goods or services by or from the related person or entities in which the related person has a material interest, indebtedness, guarantees of indebtedness and employment by us of a related person. In reviewing and approving any such transactions, our audit committee is tasked to consider all relevant facts and circumstances, including but not limited to whether the transaction is on terms comparable to those that could be obtained in an arm's length transaction with an unrelated third party and the extent of the related person's interest in the transaction. All of the transactions described in this section occurred prior to the adoption of this policy.

PRINCIPAL STOCKHOLDERS

The following table sets forth information relating to the beneficial ownership of our common stock as of August 20, 2018, by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our outstanding shares of common stock;
- each of our directors;
- each of our named executive officers; and
- all directors and executive officers as a group.

The number of shares beneficially owned by each entity, person, director or executive officer is determined in accordance with the rules of the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rules, beneficial ownership includes any shares over which the individual has sole or shared voting power or investment power as well as any shares that the individual has the right to acquire within 60 days after August 20, 2018 through the exercise of any stock option, warrants or other rights. Except as otherwise indicated, and subject to applicable community property laws, the persons named in the table have sole voting and investment power with respect to all shares of common stock held by that person.

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The percentage of shares beneficially owned is computed on the basis of 152,917,581 shares of our common stock outstanding as of August 20, 2018, which reflects the assumed conversion of all of our outstanding shares of Series A, Series B and Series C convertible preferred stock into an aggregate of 133,923,424 shares of common stock. Shares of our common stock that a person has the right to acquire within 60 days after August 20, 2018 are deemed outstanding for purposes of computing the percentage ownership of the person holding such rights, but are not deemed outstanding for purposes of computing the percentage ownership of any other person, except with respect to the percentage ownership of all directors and executive officers as a group. Unless otherwise indicated below, the address for each beneficial owner listed is c/o Gritstone Oncology, Inc., 5858 Horton Street, Suite 210, Emeryville, California 94608.

Name of Beneficial Owner	Beneficial Ownership Prior to this Offering				Beneficial Ownership After this Offering	
	Number of Outstanding Shares Beneficially Owned	Number of Shares Exercisable Within 60 Days	Number of Shares Beneficially Owned	Percentage of Beneficial Ownership	Number of Shares Beneficially Owned	Percentage of Beneficial Ownership
5% and Greater Stockholders:						
Entities affiliated with Versant Ventures(1)	21,410,256	—	21,410,256	14.0%		%
The Column Group II, LP(2)	21,410,256	—	21,410,256	14.0%		%
Clarus Lifesciences III, L.P.(3)	15,415,384	—	15,415,384	10.1%		%
Entities affiliated with Frazier Healthcare(4)	12,846,153	—	12,846,153	8.4%		%
Trinitas Capital G, L.P.(5)	12,820,512	—	12,820,512	8.4%		%
Entities affiliated with Lilly Asia Ventures(6)	9,615,383	—	9,615,383	6.3%		%
Entities affiliated with Redmile Group(7)	9,622,303	—	9,622,303	6.3%		%
Named Executive Officers and Directors:						
Andrew Allen, M.D., Ph.D.(8)	10,000,000	—	10,000,000	6.5%		%
Karin Jooss, Ph.D.(9)	2,221,000	—	2,221,000	1.5%		%
Raphaël Rousseau, M.D., Ph.D.	—	427,781	147,781	*		%
Richard Heyman, Ph.D.(10)	367,940	—	367,940	*		%
Steve Krognos	—	—	4,583	*		%
Judith Li	—	—	—	*		%
Nicholas Simon(11)	15,415,384	—	15,415,384	10.1%		%
Peter Svennilson(12)	21,410,256	—	21,410,256	14.0%		%
Thomas Woiwode, Ph.D.(13)	21,410,256	—	21,410,256	14.0%		%
All directors and executive officers as a group (14 persons)(14)	72,801,336	852,154	73,653,490	47.9%		%

* Indicates beneficial ownership of less than 1% of the total outstanding common stock.

(1) Consists of (i) 13,163,333 shares of common stock issuable upon conversion of Series A convertible preferred stock and 5,625,587 shares of common stock issuable upon conversion of Series B convertible preferred stock held by Versant Venture Capital V, L.P. ("VVC V"), (ii) 1,001,794 shares of common stock issuable upon conversion of Series A convertible preferred stock and 428,135 shares of common stock issuable upon conversion of Series B convertible preferred stock held by Versant Venture Capital V (Canada) LP ("VVC CAN"), (iii) 438,914 shares of common stock issuable upon conversion of Series A convertible preferred stock and 187,314 shares of common stock issuable upon conversion of Series B convertible preferred stock held by Versant Ophthalmic Affiliates Fund I, L.P. ("VOA"), and (iv) 395,959 shares of common stock issuable upon conversion of Series A convertible preferred stock and 169,220 shares of common stock issuable upon conversion of Series B convertible preferred stock held by Versant Affiliates Fund V, L.P. ("VAF V"). Versant Ventures V, LLC, or VV V, serves as the sole general partner of

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- VOA, VAF V and VVC V and owns no shares directly. Versant Ventures V (Canada) GP-GP, Inc. ("VV V CAN GP"), serves as the sole general partner of Versant Ventures V (Canada), L.P. ("VV V CAN"), which serves as the sole general partner of VVC CAN and owns no shares directly. Samuel D. Colella, William J. Link, Bradley Bolzon, Ph.D., Robin L. Praeger, Kirk G. Nielson and Thomas Woiwode, Ph.D. are managing directors of VV V and directors of VV V CAN GP and share voting and dispositive power over the shares held by VOA, VAF V, VVC V and VVC CAN; however, they each disclaim beneficial ownership of the shares held by VOA, VAF V, VVC V and VVC CAN, except to the extent of their pecuniary interests therein. The address for each of the Versant Ventures entities is One Sansome Street, Suite 3630, San Francisco, CA 94104.
- (2) Consists of 15,000,000 shares of common stock issuable upon conversion of Series A convertible preferred stock and 6,410,256 shares of common stock issuable upon conversion of Series B convertible preferred stock. The Column Group II GP, LP is the general partner of The Column Group II, LP. The managing partners of The Column Group II GP, LP are David Goeddel and Peter Svennilson. The managing partners of The Column Group II GP, LP may be deemed to have voting and investment power with respect to such shares. Messrs. Goeddel and Svennilson disclaim beneficial ownership of all shares above except to the extent of their pecuniary interest therein. The address of the above persons and entities is 1700 Owens Street, Suite 500, San Francisco, California 94158.
- (3) Consists of 10,800,000 shares of common stock issuable upon conversion of Series A convertible preferred stock and 4,615,384 shares of common stock issuable upon conversion of Series B convertible preferred stock. Clarus Ventures III GP, L.P. ("GPLP"), as the sole general partner of Clarus Lifesciences III, L.P. ("Clarus"), may be deemed to beneficially own certain of the shares held by Clarus. The GPLP disclaims beneficial ownership of all shares held by Clarus in which the GPLP does not have an actual pecuniary interest. Clarus Ventures III, LLC ("GPLLC"), as the sole general partner of the GPLP, may be deemed to beneficially own certain of the shares held by Clarus. The GPLLC disclaims beneficial ownership of all shares held by Clarus in which it does not have an actual pecuniary interest. Each of Nicholas Galakatos, Dennis Henner, Robert Liptak, Nicholas Simon, Scott Requadt and Kurt Wheeler, as individual managing directors of the GPLLC, may be deemed to beneficially own certain of the shares held of record by Clarus. Each of Messrs. Galakatos, Henner, Liptak, Simon, Requadt and Wheeler disclaims beneficial ownership of all shares held of record by Clarus in which he does not have an actual pecuniary interest. The address of the above persons and entities is 101 Main Street, Suite 1210, Cambridge, Massachusetts 02142.
- (4) Consists of (i) 7,004,047 shares of common stock issuable upon conversion of Series A convertible preferred stock and 2,993,182 shares of common stock issuable upon conversion of Series B convertible preferred stock held by Frazier Healthcare VII, L.P. and (ii) 1,995,953 shares of common stock issuable upon conversion of Series A convertible preferred stock and 852,971 shares of common stock issuable upon conversion of Series B convertible preferred stock held by Frazier Healthcare VII-A, L.P. The general partner of Frazier Healthcare VII, L.P. and Frazier Healthcare VII-A, L.P. is FHM VII, L.P., a Delaware limited partnership. The general partner of FHM VII, L.P. is FHM VII, LLC, a Delaware limited liability company. James Topper, Alan Frazier, Nader Naini, Nathan Every and Patrick Heron are members of FHM VII, LLC and may be deemed to share voting and investment power with respect to the shares held by FHM VII, LLC. The address of the above persons and entities is 601 Union, Two Union Square, Suite 3200, Seattle, Washington 98101.
- (5) Consists of 12,820,512 shares of common stock issuable upon conversion of Series B convertible preferred stock. Trinitas Capital, Inc. is the general partner of Trinitas Capital G, L.P., and Cheng Zhou and Bing Han share management power of Trinitas Capital, Inc. and investment and voting power with respect to the shares held by Trinitas Capital G, L.P. The address of the above persons and entities is 401, 4/F Building 2, No. 39, Dongzhimenwai Street, Dongcheng District, Beijing, China.
- (6) Consists of (i) 6,410,256 shares of common stock issuable upon conversion of Series B convertible preferred stock held by LAV Zenith Limited, (ii) 2,136,751 shares of common stock issuable upon conversion of Series B convertible preferred stock held by LAV Auspicum Limited and (iii) 1,068,376 shares of common stock issuable upon conversion of Series B convertible preferred stock held by LAV Aria Limited. LAV Zenith Limited, LAV Auspicum Limited and LAV Aria Limited are owned by LAV Biosciences Fund IV, L.P., LAV Biosciences Fund III, L.P., and Lilly Asia Ventures Fund III, L.P., respectively. LAV GP IV, L.P. is the General Partner of LAV Biosciences Fund IV, L.P. LAV GP III, L.P. is the General Partner of LAV Biosciences Fund III, L.P., and Lilly Asia Ventures Fund III, L.P. The Managing Partner of LAV GP III, L.P. and LAV GP IV, L.P. is Yi Shi. Dr. Shi may be deemed to have voting and investment power with respect to the shares of our capital stock held by LAV Zenith Limited, LAV Auspicum Limited and LAV Aria Limited.

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Dr. Shi disclaims beneficial ownership of all such shares except to the extent of his pecuniary interest therein. The address of the above person and entities is Unit 1109-10, Two Chinachem Central, 26 Des Voeux Road Central, Hong Kong.

- (7) Consists of (i) 3,000,000 shares of common stock issuable upon conversion of Series A convertible preferred stock, 1,234,626 shares of common stock issuable upon conversion of Series B convertible preferred stock and 351,302 shares of common stock issuable upon conversion of Series C convertible preferred stock held by Redmile Capital Offshore Fund II, Ltd., (ii) 1,430,000 shares of common stock issuable upon conversion of Series A convertible preferred stock, 751,971 shares of common stock issuable upon conversion of Series B convertible preferred stock and 251,303 shares of common stock issuable upon conversion of Series C convertible preferred stock held by Redmile Biopharma Investments I, L.P., (iii) 862,428 shares of common stock issuable upon conversion of Series A convertible preferred stock, 134,969 shares of common stock issuable upon conversion of Series B convertible preferred stock and 43,881 shares of Series C convertible preferred stock held by Redmile Strategic Master Fund, LP, (iv) 466,024 shares of common stock issuable upon conversion of Series A convertible preferred stock, 358,317 shares of common stock issuable upon conversion of Series B convertible preferred stock and 357,328 shares of common stock issuable upon conversion of Series C convertible preferred stock held by Redmile Capital Fund, LP, and (v) 241,548 shares of common stock issuable upon conversion of Series A convertible preferred stock, 84,219 shares of common stock issuable upon conversion of Series B convertible preferred stock and 54,87 shares of common stock issuable upon conversion of Series C convertible preferred stock held by Redmile Capital Offshore Fund, Ltd. Redmile Group, LLC is the investment manager to each of Redmile Capital Offshore Fund II, Ltd., Redmile Biopharma Investments I, L.P., Redmile Strategic Master Fund, LP, Redmile Capital Fund, LP and Redmile Capital Offshore Fund, Ltd. (collectively, the "Redmile Funds") and, in such capacity, exercises shared voting and dispositive power over the securities held by the Redmile Funds and may be deemed to beneficially own such securities. Jeremy Green serves as the managing member of Redmile Group, LLC and as such shares voting and dispositive power over the securities held by the Redmile Funds. Redmile Group, LLC and Mr. Green each disclaim beneficial ownership of these securities, except to the extent of its or his pecuniary interest in such securities, if any. The address of the above person and entities is One Letterman Drive, Building D, Suite D3-300, San Francisco, California 94129.
- (8) Consists of 10,000,000 shares of common stock, 7,916,666 of which shares will be vested within 60 days of August 20, 2018, and 2,083,334 of which shares will continue to be subject to our repurchase right.
- (9) Consists of 2,221,000 shares of common stock, 1,388,125 of which shares will be vested within 60 days of August 20, 2018, and 832,875 of which shares will continue to be subject to our repurchase right.
- (10) Consists of 367,940 shares of common stock, 262,774 of which shares will be vested within 60 days of August 20, 2018, and 105,166 of which shares will continue to be subject to our repurchase right.
- (11) Consists of the shares described in footnote 3 above. Mr. Simon disclaims beneficial ownership of all such shares except to the extent of his pecuniary interests therein.
- (12) Consists of the shares described in footnote 2 above. Mr. Svennilson disclaims beneficial ownership of all such shares except to the extent of his pecuniary interests therein.
- (13) Consists of the shares described in footnote 1 above. Dr. Woiwode disclaims beneficial ownership of all such shares except to the extent of his pecuniary interests therein.
- (14) Consists of (i) 14,565,440 shares of common stock, 11,029,350 of which shares will be vested within 60 days of August 20, 2018 and 3,536,090 of which shares will continue to be subject to our repurchase right, (ii) 852,154 shares of common stock that may be acquired pursuant to the exercise of stock options within 60 days of August 20, 2018, (iii) 40,800,000 shares of common stock issuable upon conversion of Series A convertible preferred stock and (iv) 17,435,896 shares of common stock issuable upon conversion of Series B convertible preferred stock.

DESCRIPTION OF CAPITAL STOCK

The following summary describes our capital stock and the material provisions of our amended and restated certificate of incorporation and our amended and restated bylaws, which will become effective immediately prior to the consummation of this offering, the investor rights agreement to which we and certain of our stockholders are parties and of the Delaware General Corporation Law. Because the following is only a summary, it does not contain all of the information that may be important to you. For a complete description, you should refer to our amended and restated certificate of incorporation, amended and restated bylaws and amended and restated investor rights agreement, copies of which have been filed as exhibits to the registration statement of which this prospectus is part.

General

Immediately prior to the consummation of this offering, we will file our amended and restated certificate of incorporation that authorizes 300,000,000 shares of common stock, \$0.0001 par value per share, and 10,000,000 shares of convertible preferred stock, \$0.0001 par value per share. As of August 20, 2018, there were outstanding:

- 152,917,581 shares of our common stock, on an as-converted basis, held by approximately 83 stockholders of record; and
- 16,395,414 shares of our common stock issuable upon exercise of outstanding stock options.

In connection with this offering, we expect to consummate a reverse stock split of our outstanding capital stock at a ratio to be determined.

Common Stock

Voting Rights

Each holder of our common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Our stockholders do not have cumulative voting rights in the election of directors. Accordingly, holders of a majority of the voting shares are able to elect all of the directors. In addition, the affirmative vote of holders of 66-2/3% of the voting power of all of the then outstanding voting stock will be required to take certain actions, including amending certain provisions of our amended and restated certificate of incorporation, such as the provisions relating to amending our amended and restated bylaws, the classified board and director liability.

Dividends

Subject to preferences that may be applicable to any then outstanding convertible preferred stock, holders of our common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then outstanding shares of convertible preferred stock.

Rights and Preferences

Holders of our common stock have no preemptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of our convertible preferred stock that we may designate in the future.

Fully Paid and Nonassessable

All of our outstanding shares of common stock are, and the shares of common stock to be issued in this offering will be, fully paid and nonassessable.

Convertible Preferred Stock

Immediately prior to the consummation of this offering, all outstanding shares of our convertible preferred stock will be converted into shares of our common stock. See Note 9 to our financial statements included elsewhere in this prospectus for a description of our currently outstanding convertible preferred stock. Immediately prior to the consummation of this offering, our amended and restated certificate of incorporation will be amended and restated to delete all references to such shares of convertible preferred stock. From and after the consummation of this offering, our board of directors will have the authority, without further action by our stockholders, to issue up to 10,000,000 shares of convertible preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting, or the designation of, such series, any or all of which may be greater than the rights of common stock. The issuance of our convertible preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. In addition, the issuance of convertible preferred stock could have the effect of delaying, deferring or preventing a change in control of our company or other corporate action. Immediately after consummation of this offering, no shares of convertible preferred stock will be outstanding, and we have no present plan to issue any shares of convertible preferred stock.

Options

As of August 20, 2018, we had outstanding options to purchase 16,395,414 shares of our common stock, with a per share weighted-average exercise price of \$0.57, under our 2015 Equity Incentive Plan.

Registration Rights

Under our amended and restated investors' rights agreement, based on the number of shares outstanding as of August 20, 2018, following the consummation of this offering, the holders of approximately 133.9 million shares of common stock, or their transferees, have the right to require us to register their shares under the Securities Act so that those shares may be publicly resold, and the holders of approximately 133.9 million shares of common stock, or their transferees, have the right to include their shares in any registration statement we file, in each case as described below.

Demand Registration Rights

Based on the number of shares outstanding as of August 20, 2018, after the consummation of this offering, the holders of approximately 133.9 million shares of our common stock (on an

as-converted basis), or their transferees, will be entitled to certain demand registration rights. Beginning 180 days following the effectiveness of the registration statement of which this prospectus is a part, the holders of at least 30% of these shares (or a lesser percent if the anticipated aggregate offering price to the public net of certain expenses would exceed \$10 million) can request that we register all or a portion of their shares. Additionally, we will not be required to effect a demand registration during the period beginning 120 days prior to the filing and ending 180 days following the effectiveness of a company-initiated registration statement relating to a public offering of our securities.

Piggyback Registration Rights

Based on the number of shares outstanding as of August 20, 2018, after the consummation of this offering, in the event that we determine to register any of our securities under the Securities Act (subject to certain exceptions), either for our own account or for the account of other security holders, the holders of approximately 133.9 million shares of our common stock (on an as-converted basis), or their transferees, will be entitled to certain "piggyback" registration rights allowing the holders to include their shares in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to a registration related to employee benefit plans, the offer and sale of debt securities, or corporate reorganizations or certain other transactions, the holders of these shares are entitled to notice of the registration and have the right, subject to limitations that the underwriters may impose on the number of shares included in the registration, to include their shares in the registration. In an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to limit the number of shares such holders may include.

Form S-3 Registration Rights

Based on the number of shares outstanding as of August 20, 2018, after the consummation of this offering, the holders of approximately 133.9 million shares of our common stock (on an as-converted basis), or their transferees, will be entitled to certain Form S-3 registration rights. The holders of any of at least 30% of these shares can make a written request that we register their shares on Form S-3 if we are eligible to file a registration statement on Form S-3 and if the aggregate price to the public of the shares offered is at least \$10 million net of certain expenses related to the sale of the shares. These stockholders may make an unlimited number of requests for registration on Form S-3, but in no event shall we be required to file more than two registrations on Form S-3 in any given 12 month period. Additionally, we will not be required to effect a Form S-3 registration during the period beginning 30 days prior to the filing and ending 90 days following the effectiveness of a company-initiated registration statement relating to a public offering of our securities.

Expenses of Registration

We will pay the registration expenses of the holders of the shares registered pursuant to the demand, piggyback and Form S-3 registration rights described above, including the expenses of one counsel for the selling holders.

Expiration of Registration Rights

The demand, piggyback and Form S-3 registration rights described above will expire, with respect to any particular stockholder, upon the earlier of three years after the consummation of this offering or when that stockholder can sell all of its shares under Rule 144 of the Securities Act during any three-month period.

Anti-Takeover Effects of Provisions of our Amended and Restated Certificate of Incorporation, our Amended and Restated Bylaws and Delaware Law

Some provisions of Delaware law and our amended and restated certificate of incorporation and our amended and restated bylaws that will become effective immediately prior to the consummation of this offering contain provisions that could make the following transactions more difficult: acquisition of us by means of a tender offer; acquisition of us by means of a proxy contest or otherwise; or removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions that might result in a premium over the market price for our shares.

These provisions, summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Delaware Anti-Takeover Statute

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits persons deemed “interested stockholders” from engaging in a “business combination” with a publicly-held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an “interested stockholder” is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation’s voting stock. Generally, a “business combination” includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors, such as discouraging takeover attempts that might result in a premium over the market price of our common stock.

Undesignated Preferred Stock

The ability to authorize undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deterring hostile takeovers or delaying changes in control or management of our company.

Special Stockholder Meetings

Our amended and restated bylaws provide that a special meeting of stockholders may be called by our board of directors, or by our President or Chief Executive Officer.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Our amended and restated bylaws establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors.

Elimination of Stockholder Action by Written Consent

Our amended and restated certificate of incorporation and our amended and restated bylaws eliminate the right of stockholders to act by written consent without a meeting.

Classified Board; Election and Removal of Directors; Filling Vacancies

Our board of directors is divided into three classes. The directors in each class will serve for a three-year term, one class being elected each year by our stockholders, with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Because our stockholders do not have cumulative voting rights, our stockholders holding a majority of the shares of common stock outstanding will be able to elect all of our directors. Our amended and restated certificate of incorporation provides for the removal of any of our directors only for cause and requires a stockholder vote by the holders of at least a 66-2/3% of the voting power of the then outstanding voting stock. For more information on the classified board, see "Management—Board Composition." Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of the board, may only be filled by a resolution of the board of directors unless the board of directors determines that such vacancies shall be filled by the stockholders. This system of electing and removing directors and filling vacancies may tend to discourage a third party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors.

Choice of Forum

Our amended and restated certificate of incorporation provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the exclusive forum for: any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. Similarly, our amended and restated certificate of incorporation provides that the U.S. federal district courts are the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. Although our amended and restated certificate of incorporation contains the choice of forum provision described above, it is possible that a court could find that such a provision is inapplicable for a particular claim or action or that such provision is unenforceable.

Amendment of Charter Provisions

The amendment of any of the above provisions, except for the provision making it possible for our board of directors to issue undesignated preferred stock, would require approval by a stockholder vote by the holders of at least a 66-2/3% of the voting power of the then outstanding voting stock.

The provisions of the Delaware General Corporation Law, our amended and restated certificate of incorporation and our amended and restated bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Limitations of Liability and Indemnification Matters

For a discussion of liability and indemnification, see “Management—Limitation on Liability and Indemnification Matters.”

The Nasdaq Global Market Listing

We have applied to list our common stock on The Nasdaq Global Market under the symbol “GRTS.”

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is . The transfer agent and registrar's address is .

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our common stock. Future sales of our common stock, including shares issued upon the exercise of outstanding options or warrants, in the public market after this offering, or the perception that those sales may occur, could cause the prevailing market price for our common stock to fall or impair our ability to raise equity capital in the future. As described below, only a limited number of shares of our common stock will be available for sale in the public market for a period of several months after consummation of this offering due to contractual and legal restrictions on resale described below. Future sales of our common stock in the public market either before (to the extent permitted) or after restrictions lapse, or the perception that those sales may occur, could adversely affect the prevailing market price of our common stock at such time and our ability to raise equity capital at a time and price we deem appropriate.

Sale of Restricted Shares

Based on the number of shares of our common stock outstanding as of August 20, 2018 and assuming an initial public offering price of \$ per share (the midpoint of the range set forth on the cover of this prospectus), upon the consummation of this offering and assuming (1) the conversion of all shares of our outstanding convertible preferred stock at August 20, 2018, (2) no exercise of the underwriters' option to purchase additional shares of common stock and (3) no exercise of any of our other outstanding options, we will have outstanding an aggregate of approximately shares of common stock. Of these shares, all of the shares of common stock to be sold in this offering, and any shares sold upon exercise of the underwriters' option to purchase additional shares, will be freely tradable in the public market without restriction or further registration under the Securities Act, unless the shares are held by any of our "affiliates" as such term is defined in Rule 144 of the Securities Act. All remaining shares of common stock held by existing stockholders immediately prior to the consummation of this offering will be "restricted securities" as such term is defined in Rule 144. These restricted securities were issued and sold by us, or will be issued and sold by us, in private transactions and are eligible for public sale only if registered under the Securities Act or if they qualify for an exemption from registration under the Securities Act, including the exemptions provided by Rule 144 or Rule 701, which rules are summarized below.

As a result of the lock-up agreements referred to below and the provisions of Rule 144 and Rule 701 under the Securities Act, based on the number of shares of our common stock outstanding as of August 20, 2018 and assumptions (1)-(3) described above, the shares of our common stock (excluding the shares sold in this offering) that will be available for sale in the public market are as follows:

<u>Approximate Number of Shares</u>	<u>First Date Available for Sale into Public Market</u>
152.9 million shares	180 days after the date of this prospectus upon expiration of the lock-up agreements referred to below, subject in some cases to applicable volume limitations under Rule 144 to the extent permitted by the provisions of various vesting schedules

Lock-Up Agreements

In connection with this offering, we, our directors, our executive officers and substantially all of our other stockholders and option holders have agreed, subject to certain exceptions, with the underwriters not to dispose of or hedge any shares of our common stock or securities convertible into or exchangeable for shares of common stock during the period from the date of the lock-up agreement continuing through the date 180 days after the date of this prospectus, except with the prior written consent of Goldman Sachs & Co. LLC, Cowen and Company, LLC and Barclays Capital Inc.

Prior to the consummation of the offering, certain of our employees, including our executive officers, and/or directors may enter into written trading plans that are intended to comply with Rule 10b5-1 under the Exchange Act. Sales under these trading plans would not be permitted until the expiration of the lock-up agreements relating to the offering described above.

Following the lock-up periods set forth in the agreements described above, and assuming that the representatives of the underwriters do not release any parties from these agreements, all of the shares of our common stock that are restricted securities or are held by our affiliates as of the date of this prospectus will be eligible for sale in the public market in compliance with Rule 144 under the Securities Act.

Rule 144

In general, under Rule 144, as currently in effect, once we have been subject to the public company reporting requirements of the Exchange Act, for at least 90 days, a person (or persons whose shares are required to be aggregated) who is not deemed to have been one of our "affiliates" for purposes of Rule 144 at any time during the three months preceding a sale, and who has beneficially owned restricted securities within the meaning of Rule 144 for at least six months, including the holding period of any prior owner other than one of our "affiliates," is entitled to sell those shares in the public market (subject to the lock-up agreement referred to above, if applicable) without complying with the manner of sale, volume limitations or notice provisions of Rule 144, but subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than "affiliates," then such person is entitled to sell such shares in the public market without complying with any of the requirements of Rule 144 (subject to the lock-up agreement referred to above, if applicable). In general, under Rule 144, as currently in effect, once we have been subject to the public company reporting requirements of the Exchange Act for at least 90 days, our "affiliates," as defined in Rule 144, who have beneficially owned the shares proposed to be sold for at least six months are entitled to sell in the public market, upon expiration of any applicable lock-up agreements and within any three-month period, a number of those shares of our common stock that does not exceed the greater of:

- 1% of the number of common shares then outstanding, which will equal approximately _____ shares of common stock immediately after this offering (calculated as of August 20, 2018 on the basis of the assumptions (1)-(3) described above); or
- the average weekly trading volume of our common stock on The Nasdaq Global Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Such sales under Rule 144 by our "affiliates" or persons selling shares on behalf of our "affiliates" are also subject to certain manner of sale provisions, notice requirements and to the availability of current public information about us. Notwithstanding the availability of Rule 144, the holders of substantially all of our restricted securities have entered into lock-up agreements as referenced above and their restricted securities will become eligible for sale (subject to the above limitations under Rule 144) upon the expiration of the restrictions set forth in those agreements.

Rule 701

In general, under Rule 701 as currently in effect, any of our employees, directors, officers, consultants or advisors who acquired common stock from us in connection with a written compensatory stock or option plan or other written agreement in compliance with Rule 701 under the Securities Act before the effective date of the registration statement of which this prospectus is a part (to the extent such common stock is not subject to a lock-up agreement) is entitled to rely on Rule 701

to resell such shares beginning 90 days after we become subject to the public company reporting requirements of the Exchange Act in reliance on Rule 144, but without compliance with the holding period requirements contained in Rule 144. Accordingly, subject to any applicable lock-up agreements, beginning 90 days after we become subject to the public company reporting requirements of the Exchange Act, under Rule 701 persons who are not our “affiliates,” as defined in Rule 144, may resell those shares without complying with the minimum holding period or public information requirements of Rule 144, and persons who are our “affiliates” may resell those shares without compliance with Rule 144’s minimum holding period requirements (subject to the terms of the lock-up agreement referred to above).

Registration Rights

Based on the number of shares outstanding as of August 20, 2018, after the consummation of this offering, the holders of approximately 133.9 million shares of our common stock, or their transferees, will, subject to the lock-up agreements referred to above, be entitled to certain rights with respect to the registration of the offer and sale of those shares under the Securities Act. For a description of these registration rights, see “Description of Capital Stock—Registration Rights.” If the offer and sale of these shares are registered, they will be freely tradable without restriction under the Securities Act.

Stock Plans

We intend to file with the SEC a registration statement under the Securities Act covering the shares of common stock that we may issue under our 2015 Equity Incentive Plan, our 2018 Incentive Award Plan and our 2018 Employee Stock Purchase Plan. Such registration statement is expected to be filed and become effective as soon as practicable after the consummation of this offering. Accordingly, shares registered under such registration statement will be available for sale in the open market following its effective date, subject to Rule 144 volume limitations and the lock-up agreements described above, if applicable.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following discussion is a summary of the material U.S. federal income tax consequences to Non-U.S. Holders (as defined below) of the purchase, ownership and disposition of our common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or non-U.S. tax laws are not discussed. This discussion is based on the U.S. Internal Revenue Code of 1986, as amended (the "Code"), Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service (the "IRS"), in each case in effect as of the date hereof. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a Non-U.S. Holder. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position to that discussed below regarding the tax consequences of the purchase, ownership and disposition of our common stock.

This discussion is limited to Non-U.S. Holders that hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non-U.S. Holder's particular circumstances, including the impact of the Medicare contribution tax on net investment income. In addition, it does not address consequences relevant to Non-U.S. Holders subject to special rules, including, without limitation:

- U.S. expatriates and former citizens or long-term residents of the United States;
- persons subject to the alternative minimum tax;
- persons holding our common stock as part of a hedge, straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, insurance companies, and other financial institutions;
- brokers, dealers or traders in securities;
- "controlled foreign corporations," "passive foreign investment companies," and corporations that accumulate earnings to avoid U.S. federal income tax;
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- tax-qualified retirement plans; and
- "qualified foreign pension funds" as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds.

If an entity treated as a partnership for U.S. federal income tax purposes holds our common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding our common stock and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

THIS DISCUSSION IS NOT TAX ADVICE. INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS

TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF OUR COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of Non-U.S. Holder

For purposes of this discussion, a “Non-U.S. Holder” is any beneficial owner of our common stock that is neither a “U.S. person” nor an entity treated as a partnership for U.S. federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation created or organized under the laws of the United States, any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (1) is subject to the primary supervision of a U.S. court and all substantial decisions of which are subject to the control of one or more “United States persons” (within the meaning of Section 7701(a)(30) of the Code), or (2) has a valid election in effect to be treated as a United States person for U.S. federal income tax purposes.

Distributions

As described in the section titled “Dividend Policy,” we do not anticipate paying any cash dividends in the foreseeable future. However, if we do make distributions of cash or property on our common stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and first be applied against and reduce a Non-U.S. Holder’s adjusted tax basis in its common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below under “—Sale or Other Taxable Disposition.”

Subject to the discussion below on effectively connected income, dividends paid to a Non-U.S. Holder will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty, provided the Non-U.S. Holder furnishes a valid IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) certifying qualification for the lower treaty rate). A Non-U.S. Holder that does not timely furnish the required documentation, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under any applicable tax treaties.

If dividends paid to a Non-U.S. Holder are effectively connected with the Non-U.S. Holder’s conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the United States to which such dividends are attributable), the Non-U.S. Holder will be exempt from the U.S. federal withholding tax described above. To claim the exemption, the Non-U.S. Holder must furnish to the applicable withholding agent a valid IRS Form W-8ECI, certifying that the dividends are effectively connected with the Non-U.S. Holder’s conduct of a trade or business within the United States.

Any such effectively connected dividends will be subject to U.S. federal income tax on a net income basis at the regular graduated rates. A Non-U.S. Holder that is a corporation also may be

subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected dividends, as adjusted for certain items. Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Sale or Other Taxable Disposition

Subject to the discussions below regarding backup withholding and FATCA, a Non-U.S. Holder will not be subject to U.S. federal income tax on any gain realized upon the sale or other taxable disposition of our common stock unless:

- the gain is effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the United States to which such gain is attributable);
- the Non-U.S. Holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our common stock constitutes a U.S. real property interest ("USRPI") by reason of our status as a U.S. real property holding corporation ("USRPHC") for U.S. federal income tax purposes.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular graduated rates. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected gain, as adjusted for certain items.

Gain described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty), which may be offset by certain U.S. source capital losses of the Non-U.S. Holder (even though the individual is not considered a resident of the United States), provided the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we currently are not, and do not anticipate becoming, a USRPHC. Because the determination of whether we are a USRPHC depends, however, on the fair market value of our USRPIs relative to the fair market value of our non-U.S. real property interests and our other business assets, there can be no assurance we currently are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition by a Non-U.S. Holder will not be subject to U.S. federal income tax if our common stock is "regularly traded," as defined by applicable Treasury Regulations, on an established securities market, and such Non-U.S. Holder owned, actually and constructively, 5% or less of our common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the Non-U.S. Holder's holding period.

Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Payments of dividends on our common stock will not be subject to backup withholding, provided the Non-U.S. Holder certifies its non-U.S. status, such as by furnishing a valid IRS Form W-8BEN, W-8BEN-E or W-8ECI, or otherwise establishes an exemption. However, information returns are

required to be filed with the IRS in connection with any dividends on our common stock paid to the Non-U.S. Holder, regardless of whether any tax was actually withheld. In addition, proceeds of the sale or other taxable disposition of our common stock within the United States or conducted through certain U.S.-related brokers generally will not be subject to backup withholding or information reporting if the applicable withholding agent receives the certification described above or the Non-U.S. Holder otherwise establishes an exemption. Proceeds of a disposition of our common stock conducted through a non-U.S. office of a non-U.S. broker that does not have certain enumerated relationships with the United States generally will not be subject to backup withholding or information reporting.

Copies of information returns that are filed with the IRS may also be made available under the provisions of an applicable treaty or agreement to the tax authorities of the country in which the Non-U.S. Holder resides or is established.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a Non-U.S. Holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional Withholding Tax on Payments Made to Foreign Accounts

Withholding taxes may be imposed under Sections 1471 to 1474 of the Code (such Sections commonly referred to as the Foreign Account Tax Compliance Act, or "FATCA") on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends on, or gross proceeds from the sale or other disposition of, our common stock paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (1) the foreign financial institution undertakes certain diligence and reporting obligations, (2) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (3) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (1) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States-owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends on our common stock, and, beginning on January 1, 2019, will apply to payments of gross proceeds from the sale or other disposition of such stock.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our common stock.

UNDERWRITING

We and the underwriters named below have entered into an underwriting agreement with respect to the shares being offered. Subject to certain conditions, each underwriter has severally agreed to purchase the number of shares indicated in the following table. Goldman Sachs & Co. LLC, Cowen and Company, LLC and Barclays Capital Inc. are the representatives of the underwriters.

<u>Underwriters</u>	<u>Number of Shares</u>
Goldman Sachs & Co. LLC	
Cowen and Company, LLC	
Barclays Capital Inc.	
BTIG, LLC	
Total	_____

The underwriters are committed to take and pay for all of the shares being offered, if any are taken, other than the shares covered by the option described below unless and until this option is exercised.

The underwriters have an option to buy up to an additional _____ shares from us to cover sales by the underwriters of a greater number of shares than the total number set forth in the table above. They may exercise that option for 30 days. If any shares are purchased pursuant to this option, the underwriters will severally purchase shares in approximately the same proportion as set forth in the table above.

The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters by us. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase up to _____ additional shares from us.

	<u>No Exercise</u>	<u>Full Exercise</u>
Per Share	\$	\$
Total	\$	\$

Shares sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to \$ _____ per share from the initial public offering price. After the initial offering of the shares, the representatives may change the offering price and the other selling terms. The offering of the shares by the underwriters is subject to receipt and acceptance and subject to the underwriters' right to reject any order in whole or in part.

We and our executive officers, directors, and holders of substantially all of our common stock and securities convertible into or exchangeable for our common stock have agreed or will agree with the underwriters, subject to certain exceptions, not to dispose of or hedge any of our or their common stock or securities convertible into or exchangeable for shares of common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus, except with the prior written consent of Goldman Sachs & Co. LLC, Cowen and Company, LLC and Barclays Capital Inc. This agreement does not apply to any existing employee benefit plans. See the section titled "Shares Eligible for Future Sale" for a discussion of certain transfer restrictions.

Prior to the offering, there has been no public market for the shares. The initial public offering price has been negotiated among the company and the representatives. Among the factors to be

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considered in determining the initial public offering price of the shares, in addition to prevailing market conditions, will be the company's historical performance, estimates of the business potential and earnings prospects of the company, an assessment of the company's management and the consideration of the above factors in relation to market valuation of companies in related businesses.

We have applied to list our common stock on The Nasdaq Global Market under the symbol "GRTS".

In connection with the offering, the underwriters may purchase and sell shares of our common stock in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering, and a short position represents the amount of such sales that have not been covered by subsequent purchases. A "covered short position" is a short position that is not greater than the amount of additional shares for which the underwriters' option described above may be exercised. The underwriters may cover any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to cover the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase additional shares pursuant to the option described above. "Naked" short sales are any short sales that create a short position greater than the amount of additional shares for which the option described above may be exercised. The underwriters must cover any such naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Purchases to cover a short position and stabilizing transactions, as well as other purchases by the underwriters for their own accounts, may have the effect of preventing or retarding a decline in the market price of our common stock, and together with the imposition of the penalty bid, may stabilize, maintain or otherwise affect the market price of our common stock. As a result, the price of our common stock may be higher than the price that otherwise might exist in the open market. The underwriters are not required to engage in these activities and may end any of these activities at any time. These transactions may be effected on The Nasdaq Global Market, in the over-the-counter market or otherwise.

We estimate that our share of the total expenses of the offering, excluding underwriting discounts and commissions, will be approximately \$ million. We have agreed to reimburse the underwriters for certain of their expenses in an amount up to \$.

We have agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Certain of the underwriters and their respective affiliates have provided, and may in the future provide, a variety of these services to

the issuer and to persons and entities with relationships with the issuer, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities or instruments of the issuer (directly, as collateral securing other obligations or otherwise) or persons and entities with relationships with the issuer. The underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State") an offer to the public of our common stock may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of our common stock may be made at any time under the following exemptions under the Prospectus Directive:

- To any legal entity which is a qualified investor as defined in the Prospectus Directive;
- To fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive), subject to obtaining the prior consent of the representatives for any such offer; or
- In any other circumstances falling within Article 3(2) of the Prospectus Directive;

provided that no such offer or shares of our common stock shall require us or any underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to public" in relation to our common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and our common stock to be offered so as to enable an investor to decide to purchase our common stock, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, and the expression "Prospectus Directive" means Directive 2003/71/EC (as amended), including by Directive 2010/73/EU and includes any relevant implementing measure in the Relevant Member State.

This European Economic Area selling restriction is in addition to any other selling restrictions set out below.

United Kingdom

In the United Kingdom, this prospectus is only addressed to and directed at qualified investors who are (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the Order); or (ii) high net worth entities and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). Any investment or investment activity to

which this prospectus relates is available only to relevant persons and will only be engaged in with relevant persons. Any person who is not a relevant person should not act or rely on this prospectus or any of its contents.

Canada

The securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions, and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption form, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Hong Kong

The securities may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong) ("Companies (Winding Up and Miscellaneous Provisions) Ordinance") or which do not constitute an invitation to the public within the meaning of the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) ("Securities and Futures Ordinance"), or (ii) to "professional investors" as defined in the Securities and Futures Ordinance and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance, and no advertisement, invitation or document relating to the securities may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" in Hong Kong as defined in the Securities and Futures Ordinance and any rules made thereunder.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined under Section 4A of the Securities and Futures Act, Chapter 289 of

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Singapore (the "SFA") under Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to conditions set forth in the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor, the securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferable for 6 months after that corporation has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer in that corporation's securities pursuant to Section 275(1A) of the SFA, (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore ("Regulation 32").

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor (as defined in Section 4A of the SFA)) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for 6 months after that trust has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than S\$200,000 (or its equivalent in a foreign currency) for each transaction (whether such amount is to be paid for in cash or by exchange of securities or other assets), (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32.

Japan

The securities have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended), or the FIEA. The securities may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, directly or indirectly, in Japan or to or for the benefit of any resident of Japan, except pursuant to an exemption from the registration requirements of the FIEA and otherwise in compliance with any relevant laws and regulations of Japan.

Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission ("ASIC"), in relation to the offering. This offering document does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the "Corporations Act"), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons (the “Exempt Investors”) who are “sophisticated investors” (within the meaning of section 708(8) of the Corporations Act), “professional investors” (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This offering document contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this offering document is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Dubai International Financial Centre

This offering document relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority (“DFSA”). This offering document is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth in this prospectus and has no responsibility for the offering document. The securities to which this offering document relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the securities offered should conduct their own due diligence on the securities. If you do not understand the contents of this offering document you should consult an authorized financial advisor.

Switzerland

We have not and will not register with the Swiss Financial Market Supervisory Authority (“FINMA”) as a foreign collective investment scheme pursuant to Article 119 of the Federal Act on Collective Investment Scheme of 23 June 2006, as amended (“CISA”), and accordingly the securities being offered pursuant to this prospectus have not and will not be approved, and may not be licenseable, with FINMA. Therefore, the securities have not been authorized for distribution by FINMA as a foreign collective investment scheme pursuant to Article 119 CISA and the securities offered hereby may not be offered to the public (as this term is defined in Article 3 CISA) in or from Switzerland. The securities may solely be offered to “qualified investors,” as this term is defined in Article 10 CISA, and in the circumstances set out in Article 3 of the Ordinance on Collective Investment Scheme of 22 November 2006, as amended (“CISO”), such that there is no public offer. Investors, however, do not benefit from protection under CISA or CISO or supervision by FINMA. This prospectus and any other materials relating to the securities are strictly personal and confidential to each offeree and do not constitute an offer to any other person. This prospectus may only be used by those qualified investors to whom it has been handed out in connection with the offer described in this prospectus and may neither directly or indirectly be distributed or made available to any person or entity other than its recipients. It may not be used in connection with any other offer and shall in particular not be copied and/or distributed to the public in Switzerland or from Switzerland. This

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prospectus does not constitute an issue prospectus as that term is understood pursuant to Article 652a and/or 1156 of the Swiss Federal Code of Obligations. We have not applied for a listing of the securities on the SIX Swiss Exchange or any other regulated securities market in Switzerland, and consequently, the information presented in this prospectus does not necessarily comply with the information standards set out in the listing rules of the SIX Swiss Exchange and corresponding prospectus schemes annexed to the listing rules of the SIX Swiss Exchange.

LEGAL MATTERS

The validity of the issuance of our common stock offered in this prospectus will be passed upon for us by Latham & Watkins LLP, Menlo Park, California. Cooley LLP, San Francisco, California, is acting as counsel for the underwriters in connection with this offering. Latham & Watkins LLP and certain attorneys and investment funds affiliated with the firm own shares of our convertible preferred stock which will be converted into an aggregate of 88,614 shares of common stock immediately prior to the completion of this offering.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our financial statements and related notes at December 31, 2016 and 2017, and for each of the two years in the period ended December 31, 2017, as set forth in their report (which contains an explanatory paragraph describing conditions that raise substantial doubt about the Company's ability to continue as a going concern as described in Note 2 to the financial statements). We have included our financial statements and related notes in this prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of common stock offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules filed therewith. For further information with respect to Gritstone Oncology, Inc. and the common stock offered hereby, reference is made to the registration statement and the exhibits and schedules filed therewith. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and each such statement is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the registration statement. A copy of the registration statement and the exhibits and schedules filed therewith may be inspected without charge at the public reference room maintained by the SEC, located at 100 F Street N.E., Room 1580, Washington, D.C. 20549, and copies of all or any part of the registration statement may be obtained from such offices upon the payment of the fees prescribed by the SEC. Please call the SEC at 1-800-SEC-0330 for further information about the public reference room. The SEC also maintains a website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address is www.sec.gov.

Upon consummation of this offering, we will become subject to the information and periodic reporting requirements of the Exchange Act and, in accordance therewith, will file periodic reports, proxy statements and other information with the SEC. Such periodic reports, proxy statements and other information will be available for inspection and copying at the public reference room and website of the SEC referred to above. We maintain a website at www.gritstoneoncology.com. Upon consummation of this offering, you may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The reference to our website address does not constitute incorporation by reference of the information contained on our website, and you should not consider the contents of our website in making an investment decision with respect to our common stock.

GRITSTONE ONCOLOGY, INC.

Index to Financial Statements

For the Years Ended December 31, 2016 and 2017

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Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of
Gritstone Oncology, Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Gritstone Oncology, Inc. (the Company) as of December 31, 2016 and 2017, and the related statements of operations and comprehensive loss, statements of stockholders' equity and cash flows for the years then ended, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2016 and 2017, and the results of its operations and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

The Company's Ability to Continue as a Going Concern

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the financial statements, the Company has suffered recurring losses from operations and has stated that substantial doubt exists about the Company's ability to continue as a going concern. Management's evaluation of the events and conditions and management's plans regarding these matters are also described in Note 2. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2016.

Redwood City, California
May 4, 2018

Gritstone Oncology, Inc.
Balance Sheets
(In thousands, except share amounts)

	December 31,	
	2016	2017
Assets		
Current assets:		
Cash and cash equivalents	\$ 12,410	\$ 39,007
Marketable securities	25,097	46,946
Prepaid expenses and other current assets	884	2,526
Total current assets	38,391	88,479
Property and equipment, net	7,490	27,211
Deposits and other long-term assets	540	1,610
Total assets	\$ 46,421	\$117,300
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	\$ 762	\$ 3,935
Accrued compensation	1,037	2,227
Accrued liabilities	695	1,490
Total current liabilities	2,494	7,652
Deferred rent, net of current portion	2,060	1,749
Other non-current liabilities	178	96
Lease financing obligation, net of current portion	—	10,521
Total liabilities	4,732	20,018
Commitments and contingencies (Note 6)		
Stockholders' equity:		
Convertible preferred stock, \$0.0001 par value; 110,000,000 and 125,362,551 shares authorized at December 31, 2016 and 2017, respectively; 61,260,000 and 122,803,319 shares issued and outstanding at December 31, 2016 and 2017, respectively; aggregate liquidation preference of \$61,260 and \$157,268 at December 31, 2016 and 2017, respectively	61,139	156,937
Common stock, \$0.0001 par value; 160,000,000 shares authorized at December 31, 2016 and 2017; 12,501,385 and 14,852,480 shares issued and outstanding at December 31, 2016 and 2017, respectively	1	1
Additional paid-in capital	802	2,045
Accumulated other comprehensive loss	(3)	(74)
Accumulated deficit	(20,250)	(61,627)
Total stockholders' equity	41,689	97,282
Total liabilities and stockholders' equity	\$ 46,421	\$117,300

See accompanying notes to financial statements.

Gritstone Oncology, Inc.
Statements of Operations and Comprehensive Loss
(In thousands, except share and per share amounts)

	<u>Year Ended December 31</u>	
	<u>2016</u>	<u>2017</u>
Operating expenses:		
Research and development	\$ 13,916	\$ 35,691
General and administrative	5,064	6,072
Total operating expenses	<u>18,980</u>	<u>41,763</u>
Loss from operations	<u>(18,980)</u>	<u>(41,763)</u>
Interest income, net	230	386
Net loss	<u>(18,750)</u>	<u>(41,377)</u>
Other comprehensive loss:		
Unrealized loss on marketable securities, net of tax	(3)	(71)
Comprehensive loss	<u>\$ (18,753)</u>	<u>\$ (41,448)</u>
Net loss per share, basic and diluted	<u>\$ (1.62)</u>	<u>\$ (3.00)</u>
Weighted-average number of shares used in computing net loss per share, basic and diluted	<u>11,540,581</u>	<u>13,793,417</u>
Pro forma net loss per share, basic and diluted (unaudited)		<u>\$ (0.44)</u>
Weighted-average number of shares used in computing pro forma net loss per share, basic and diluted (unaudited)		<u>94,529,860</u>

See accompanying notes to financial statements.

Gritstone Oncology, Inc.
Statements of Stockholders' Equity
(In thousands, except share amounts)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount				
Balances at December 31, 2015	25,525,000	\$ 25,425	11,437,328	\$ 1	\$ 61	\$ —	\$ (1,500)	\$ 23,987
Issuance of Series A convertible preferred stock at \$1.00 per share for cash, net of issuance costs of \$21	35,735,000	35,714	—	—	—	—	—	35,714
Unrealized loss on marketable securities, net of tax	—	—	—	—	—	(3)	—	(3)
Lapse of repurchase rights related to common stock issued pursuant to early exercises	—	—	1,064,057	—	53	—	—	53
Stock-based compensation	—	—	—	—	597	—	—	597
Issuance of common stock warrants for license	—	—	—	—	91	—	—	91
Net loss	—	—	—	—	—	—	(18,750)	(18,750)
Balances at December 31, 2016	61,260,000	61,139	12,501,385	1	802	(3)	(20,250)	41,689
Issuance of Series B convertible preferred stock in at \$1.56 per share for cash, net of issuance costs of \$210	61,543,319	95,798	—	—	—	—	—	95,798
Unrealized loss on marketable securities, net of tax	—	—	—	—	—	(71)	—	(71)
Lapse of repurchase rights related to common stock issued pursuant to early exercises	—	—	2,338,595	—	117	—	—	117
Issuance of common stock upon exercise of stock options	—	—	12,500	—	—	—	—	—
Stock-based compensation	—	—	—	—	1,126	—	—	1,126
Net loss	—	—	—	—	—	—	(41,377)	(41,377)
Balances at December 31, 2017	<u>122,803,319</u>	<u>\$156,937</u>	<u>14,852,480</u>	<u>\$ 1</u>	<u>\$ 2,045</u>	<u>\$ (74)</u>	<u>\$ (61,627)</u>	<u>\$ 97,282</u>

See accompanying notes to financial statements.

Gritstone Oncology, Inc.
Statements of Cash Flows

(In thousands)

	Year Ended December 31,	
	2016	2017
Operating activities		
Net loss	\$ (18,750)	\$ (41,377)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	823	1,970
Net amortization of premiums and discounts on marketable securities	43	(158)
Stock-based compensation	597	1,126
Warrant issuance in conjunction with license agreement	91	—
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(459)	(416)
Deposits and other long term assets	(487)	(78)
Accounts payable	(760)	2,273
Accrued compensation	1,018	1,190
Accrued and other non-current liabilities	532	810
Deferred rent	2,060	(311)
Net cash used in operating activities	<u>(15,292)</u>	<u>(34,971)</u>
Investing activities		
Purchase of marketable securities	(47,993)	(63,228)
Maturities of marketable securities	22,850	41,467
Purchase of property and equipment	(6,984)	(11,522)
Disposition of property and equipment	—	31
Net cash used in investing activities	<u>(32,127)</u>	<u>(33,252)</u>
Financing activities		
Proceeds from issuance of common stock under equity incentive plan	232	14
Proceeds from issuance of convertible preferred stock, net of issuance costs	35,714	95,798
Net cash provided by financing activities	<u>35,946</u>	<u>95,812</u>
Net (decrease) increase in cash, cash equivalents and restricted cash	(11,473)	27,589
Cash, cash equivalents and restricted cash at beginning of period	23,883	12,410
Cash, cash equivalents and restricted cash at end of period	<u>\$ 12,410</u>	<u>\$ 39,999</u>
Supplemental disclosures of non-cash investing and financing information		
Property and equipment purchases accrued but not yet paid	<u>\$ 61</u>	<u>\$ 900</u>
Building and improvements capitalized under lease financing transaction	<u>\$ —</u>	<u>\$ 9,300</u>
Receivable from lessor funded financing	<u>\$ —</u>	<u>\$ 1,226</u>

See accompanying notes to financial statements.

**Gritstone Oncology, Inc.
Notes to Financial Statements**

December 31, 2017

1. Organization and Description of Business

Gritstone Oncology, Inc. (the Company) is an immuno-oncology company developing personalized cancer immunotherapies to fight multiple cancer types. The Company was incorporated in the state of Delaware in August 2015, and is based in Emeryville, California and Cambridge, Massachusetts, with a manufacturing facility in Pleasanton, California. The Company operates in one segment.

2. Summary of Significant Accounting Policies

Basis of Presentation

The Company's financial statements have been prepared in accordance with United States generally accepted accounting principles (U.S. GAAP).

Unaudited Pro Forma Information

Immediately prior to the completion of this offering, all outstanding shares of convertible preferred stock will convert into common stock. Pro forma basic and diluted net loss per share has been computed to give effect to the conversion of all outstanding convertible preferred stock into shares of common stock. The unaudited pro forma net loss per share for the year ended December 31, 2017 was computed using the weighted-average number of shares of common stock outstanding, including the pro forma effect of the conversion of all outstanding shares of convertible preferred stock into shares of common stock, as if such conversion had occurred at the beginning of the period, or their issuance dates if later. Pro forma net loss per share does not include the shares expected to be sold and related proceeds to be received from the Company's initial public offering ("IPO").

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities as of the date of the financial statements and the reported amounts of expenses during the reporting period. On an ongoing basis, management evaluates its estimates, including those related to preclinical study trial accruals, fair value of assets and liabilities, the fair value of leased buildings and other assumptions associated with lease financing transactions, and the fair value of common stock and stock-based compensation. Management bases its estimates on historical experience and on various other market-specific and relevant assumptions that management believes to be reasonable under the circumstances. Actual results could differ from those estimates.

Going Concern

The Company has incurred significant losses and negative cash flows from operations since its inception and had an accumulated deficit of \$61.6 million at December 31, 2017 and does not expect to experience positive cash flows in the foreseeable future.

Gritstone Oncology, Inc.
Notes to Financial Statements

December 31, 2017

As of December 31, 2017, the Company had \$86.0 million in cash, cash equivalents and marketable securities and working capital of \$80.8 million. Management expects to incur additional losses in the future to conduct product research and development and to conduct pre-commercialization activities and recognizes the need to raise additional capital to fully implement its business plan. The Company intends to raise such capital through the sale of convertible stock, additional equity, debt financings or strategic alliances with third parties. However, there can be no assurance that the Company will be successful in acquiring additional funding at levels sufficient to fund its operations or on terms acceptable to the Company. These conditions raise substantial doubt about the Company's ability to continue as a going concern for a period of one year from the date of the issuance of these financial statements. If the Company is unsuccessful in its efforts to raise additional financing, the Company could be required to significantly reduce operating expenses and delay, reduce the scope of or eliminate some of its development programs or its future commercialization efforts, out-license intellectual property rights to its product candidates and sell unsecured assets, or a combination of the above, any of which may have a material adverse effect on the Company's business, results of operations, financial condition and/or its ability to fund its scheduled obligations on a timely basis or at all. The accompanying financial statements have been prepared assuming that the Company will continue as a going concern, which contemplates the realization of assets and the settlement of liabilities and commitments in the normal course of business. The financial statements do not reflect any adjustments relating to the recoverability and classification of assets or the amounts and classification of liabilities that might be necessary if the Company is unable to continue as a going concern.

Fair Value of Financial Instruments

Accounting Standards Codification (ASC) Topic 820, *Fair Value Measurement*, establishes a fair value hierarchy for instruments measured at fair value that distinguishes between assumptions based on market data (observable inputs) and the Company's own assumptions (unobservable inputs). Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing the asset or liability, and are developed based on the best information available in the circumstances.

ASC 820 identifies fair value as the exchange price, or exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As a basis for considering market participant assumptions in fair value measurements, ASC 820 establishes a three-tier fair value hierarchy that distinguishes between the following:

- Level 1 inputs are quoted prices in active markets that are accessible at the market date for identical assets or liabilities.
- Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3 inputs are unobservable inputs that reflect the Company's own assumptions about the assumptions market participants would use in pricing the assets or liability. Financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement.

To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the

Gritstone Oncology, Inc.
Notes to Financial Statements

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degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value instrument.

The carrying amounts reflected on the balance sheets for cash and cash equivalents, prepaid expenses and other current assets, accounts payable, accrued compensation and accrued liabilities approximate their fair values due to their short-term nature.

Cash, Cash Equivalents and Restricted Cash

Cash equivalents, which consist primarily of highly liquid investments with maturities of three months or less when purchased, are stated at cost which approximates fair value. These assets include investments in money market funds that invest in U.S. Treasury obligations and certificates of deposit which are stated at fair value.

The Company has issued a letter of credit under a lease agreement which has been collateralized by a cash deposit for an equal amount and is recorded within deposits and other long-term assets on the balance sheet based on the term of the underlying lease. The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the balance sheets that sum to the total of the same amounts shown in the statements of cash flows (in thousands).

	<u>December 31,</u>	
	<u>2016</u>	<u>2017</u>
Cash and cash equivalents	\$12,410	\$39,007
Restricted cash	—	992
Total cash, cash equivalents and restricted cash	<u>\$12,410</u>	<u>\$39,999</u>

Marketable Securities

The Company invests its excess cash in investment grade short-term fixed income securities. Such investments in marketable securities are considered available for sale, and reported at fair value with unrealized gains and losses included as a component of accumulated other comprehensive income (loss). Marketable securities with original maturities of greater than 90 days from the date of purchase but less than one year from the balance sheet date are classified as short-term, while marketable securities with maturities in one year or beyond one year from the balance sheet date are classified as long term. The amortized cost of debt securities is adjusted for amortization of premiums and accretion of discounts to maturity, which is included in interest income on the statements of operations and comprehensive loss. Realized gains and losses and declines in value judged to be other than temporary, if any, on available-for-sale securities are included in interest and other income (expense), net. The cost of securities sold is determined using specific identification method.

The Company periodically evaluates whether declines in fair values of its marketable securities below their book value are other than temporary. This evaluation consists of several qualitative and quantitative factors regarding the severity and duration of the unrealized loss as well as the Company's ability and intent to hold the marketable security until a forecasted recovery occurs. Additionally, the Company assesses whether it has plans to sell the security or it is more likely than not it will be

Gritstone Oncology, Inc.
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required to sell any marketable securities before recovery of its amortized cost basis. Factors considered include quoted market prices, recent financial results and operating trends, implied values from any recent transactions or offers of investee securities, credit quality of debt instrument issuers, other publicly available information that may affect the value of the marketable security, duration and severity of the decline in value, and the Company's strategy and intentions for holding the marketable security. To date the Company has not recorded any impairment charges on its marketable securities related to other-than-temporary declines in market value.

Concentrations of Credit Risk and Other Risks and Uncertainties

Financial instruments that potentially subject the Company to concentrations of credit risk consist of cash, cash equivalents, and marketable securities. Cash, cash equivalents and marketable securities are invested through banks and other financial institutions in the United States. Such deposits may be in excess of federally insured limits. The Company maintains cash equivalents and marketable securities with various high-credit-quality and capitalized financial institutions. The Company has not experienced any credit losses in such accounts and does not believe it is exposed to any significant credit risk on these funds.

The Company's investment policy limits investments to certain types of securities issued by the U.S. government, its agencies, and institutions with investment-grade credit ratings and places restrictions on maturities and concentration by type and issuer. The Company is exposed to credit risk in the event of a default by the financial institutions holding its cash, cash equivalents, and marketable securities and issuers of marketable securities to the extent recorded on the balance sheets. Through December 31, 2017, the Company has no off-balance sheet concentrations of credit risk.

The Company is subject to a number of risks similar to those of other preclinical-stage immunotherapy companies, including dependence on key individuals; the need to develop commercially viable therapeutics; competition from other companies, many of which are larger and better capitalized; and the need to obtain adequate additional financing to fund the development of its products. The Company currently depends on third-party suppliers for key materials and services used in its research and development manufacturing process, and is subject to certain risks related to the loss of these third-party suppliers or their inability to supply the Company with adequate materials and services.

Property and Equipment, Net

Property and equipment are stated at cost, less accumulated depreciation and amortization. Maintenance and repairs that do not improve or extend the lives of the respective assets are expensed to operations as incurred.

Depreciation is calculated using the straight-line method over the estimated useful lives of the respective assets, which are as follows:

<u>Asset</u>	<u>Estimated Useful Life</u>
Computer equipment and software	3 to 5 years
Furniture and fixtures	5 years
Laboratory equipment	5 to 7 years
Leasehold improvements	Shorter of useful life or lease term

**Gritstone Oncology, Inc.
Notes to Financial Statements**

December 31, 2017

Property and equipment includes a leased building which did not meet the sale-leaseback criteria and was recorded at its fair value plus the cost of improvements made during the construction period. The leased building is being depreciated over the lease term to a residual value that will approximate the remaining lease financing obligation at the end of the lease (see Note 6).

Impairment of Long-Lived Assets

The Company evaluates long-lived assets, including property and equipment, for impairment whenever events or changes in business circumstances indicate that the carrying amount of the asset may not be fully recoverable. An impairment loss would be recognized when estimated undiscounted future cash flows expected to result from the use of the asset and its eventual disposition are less than its carrying amount. Impairment, if any, is measured as the amount by which the carrying amount of a long-lived asset exceeds its fair value. No impairment losses have been recorded for the periods presented.

Stock-Based Compensation

The Company measures and recognize compensation expense for all stock-based awards made to employees and directors based on the grant date estimated fair value of each award. Such expense is recognized on a straight-line basis over the requisite service period which is generally the vesting period for the entire award. Expense is adjusted for estimated forfeitures. Forfeitures of awards are estimated based on historical forfeiture experience and the experience of other companies in the same industry. The estimate of forfeitures will be adjusted over the service period to the extent that actual forfeitures differ, or are expected to differ, from prior estimates.

The valuation model used for calculating the fair value of awards for stock compensation expense is the Black-Scholes option-pricing model (the Black-Scholes model). The Black-Scholes model requires management to make assumptions and judgments about the variables used in the calculation, including the expected term (weighted-average period of time that the options granted are expected to be outstanding), the expected volatility of common stock, an assumed risk-free interest rate, and expected dividends the Company may pay. Management uses the simplified calculation of the expected term. Volatility is based on an average of the historical volatilities of the common stock of entities with characteristics similar to the Company's. The risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant for periods corresponding with the expected life of the option. The Company uses an assumed dividend yield of zero as the Company has never paid dividends and has no current plans to pay any dividends on its common stock.

Management recognizes stock-based compensation expense for stock options granted to non-employees based on the estimated fair value of the award on the measurement dates using the Black-Scholes model. The estimated fair value of options granted to non-employees is re-measured at each reporting period using the Black-Scholes model until the awards vest and the resulting change in value, if any, is recognized in the statement of operations and comprehensive loss

Research and Development Expenses

All research and development costs, including work performed by third parties, are expensed as incurred. Research and development costs consist of salaries and other personnel-related expenses,

**Gritstone Oncology, Inc.
Notes to Financial Statements**

December 31, 2017

including associated stock-based compensation, consulting fees, laboratory supplies, and facility costs, as well as fees paid to other entities that conduct certain research and development activities on behalf of the Company. Costs to develop the Company's technologies are recorded as research and development expense unless certain costs which meet the criteria to be capitalized as internal-use software costs is met. Payments made prior to the receipt of goods or services to be used in research and development are capitalized until the goods are received or services are rendered.

The Company has and may continue to enter into license agreements to access and utilize certain technology. In each case, the Company evaluates of the license agreement results in the acquisition of an asset or a business. To date, none of the Company's license agreements have been considered to be acquisitions of businesses. For asset acquisitions, the upfront payments to acquire such licenses, as well as any future milestone payments, are immediately recognized as research and development expense when paid, provided that there is no alternative future use of the rights in other research and development projects. These license agreements may also include contingent consideration in the form of cash payments to be made for future milestone events. The Company assess whether such contingent consideration meets the definition of a derivative and to date the Company has determined that such contingent consideration are not derivatives.

Pre-clinical costs are a component of research and development expense. The Company accrues and expenses pre-clinical trial activities performed by third parties based upon actual work completed in accordance with agreements established with its service providers. The Company determines the actual costs through discussions with internal personnel and external service providers as to the progress or stage of completion of services and the agreed-upon fee to be paid for such services.

Leases and Deferred Rent and Lease Financing Obligation

The Company rents its office space and facilities under non-cancelable operating lease agreements and recognize related rent expense on a straight-line basis over the term of the lease. The Company's lease agreements contain rent holidays, scheduled rent increases, and renewal options. Rent holidays and scheduled rent increases are included in the determination of rent expense to be recorded ratably over the lease term. The Company does not assume renewals in its determination of the lease term unless they are deemed to be reasonably assured at the inception of the lease. The Company begins recognizing rent expense on the date that it obtains the legal right to use and control the leased space. Deferred rent consists of the difference between cash payments and the recognition of rent expense on a straight-line basis for the buildings the Company occupies.

Funding of leasehold improvements by the Company's landlord is accounted for as a tenant improvement allowance and recorded as current and non-current deferred rent liabilities and amortized on a straight-line basis as a reduction of rent expense over the term of the lease.

In certain arrangements, the Company is involved in the construction of improvements to buildings it is leasing. To the extent the Company is involved with the structural improvements of the construction project or takes construction risk, the Company is considered to be the owner of the building and related improvements for accounting purposes during the construction period. The Company records the fair value of the building and related improvements subject to the lease within property and equipment on the balance sheet. The Company also records a corresponding lease financing obligation on its balance sheet representing the amounts financed by the lessor for the

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building and lessor financed improvements. Lessor financed improvement incentives due but not yet received of \$1.2 million at December 31, 2107 were recorded as prepaid expense and other current assets on the balance sheet. Such amounts were fully collected in April 2018. Once a construction project is complete, the Company considers the requirements for sale-leaseback accounting treatment. If the Company concludes the arrangement does not qualify for sale-leaseback accounting treatment, the building and related improvements remain on the Company's balance sheet and are subject to depreciation and assessment of impairment.

For such arrangements, at both pre and post the construction period, the Company bifurcates its lease payments into a portion allocated to the building and a portion allocated to the parcel of land on which the building has been built. The portion of the lease payments allocated to the land is treated for accounting purposes as operating lease payments, and therefore is recorded as rent expense in the statements of operations and comprehensive loss. The portion of the lease payments allocated to the building is further bifurcated into a portion allocated to interest expense and a portion allocated to reduce the lease financing obligation. The interest rate used for the lease financing obligation represents the Company's estimated incremental borrowing rate at the inception of the lease, adjusted to reduce any built in loss.

Income Taxes

Management accounts for income taxes under the liability method. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates that will be in effect when the differences are expected to reverse. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts expected to be realized.

The Company recognizes and measures uncertain tax positions using a two—step approach set forth in authoritative guidance. The first step is to evaluate the tax position taken or expected to be taken by determining whether the weight of available evidence indicates that it is more likely than not that the tax position will be sustained in an audit, including resolution of any related appeals or litigation processes. The second step is to measure the tax benefit as the largest amount that is more than 50% likely to be realized upon ultimate settlement. Significant judgment is required to evaluate uncertain tax positions. The Company evaluates uncertain tax positions on a regular basis. The evaluations are based on a number of factors, including changes in facts and circumstances, changes in tax law, correspondence with tax authorities during the course of the audit, and effective settlement of audit issues. The provision for income taxes includes the effects of any accruals that the Company believes are appropriate. It is the Company's policy to recognize interest and penalties related to income tax matters in income tax expense. Through December 31, 2017, the Company had not accrued interest or penalties related to uncertain tax positions.

On December 22, 2017, the Securities and Exchange Commission Staff issued Staff Accounting Bulletin No. 118 (SAB 118) to address the accounting implications of U.S. federal tax reform enacted on December 22, 2017. SAB 118 allows a company to record provisional amounts during a measurement period not to extend beyond one year from the enactment date (see Note 11).

Comprehensive Loss

Comprehensive loss includes net loss and certain changes in stockholders' equity that are excluded from net loss, primarily unrealized losses on the Company's marketable securities.

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Net Loss Per Share

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of shares of common stock outstanding during the period, without consideration for common stock equivalents. Diluted net loss per share is the same as basic net loss per share, since the effects of potentially dilutive securities are antidilutive given the net loss for each period presented.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09 (ASU 2014-09), *Revenue from Contracts with Customers* (Topic 606), and further updated through ASU 2016-12 (ASU 2016-12), which amends the existing accounting standards for revenue recognition. For public entities, this standard is effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. For all other entities, this standard is effective for annual reporting periods beginning after December 15, 2018, and interim periods within annual periods beginning after December 15, 2019. Early adoption is permitted. Under Topic 606, an entity recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that an entity determines are within the scope of Topic 606, the entity performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. Topic 606 also impacts certain other areas, such as the accounting for costs to obtain or fulfill a contract. The standard also requires disclosure of the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. Effective January 1, 2017, the Company early adopted Topic 606, using the full retrospective transition method. The adoption did not have any impact on the Company's financial statements as the Company has never had any revenue from contracts with customers.

In February 2016, the FASB issued ASU 2016-02, *Leases* (Topic 842). ASU 2016-02 amends a number of aspects of lease accounting, including requiring lessees to recognize almost all leases with a term greater than one year as a right-of-use asset and corresponding liability, measured at the present value of the lease payments. For public entities, this standard is effective for annual reporting periods beginning after December 31, 2018, including interim periods within that reporting period. For all other entities, this standard is effective for annual reporting periods beginning after December 15, 2019, and interim periods within annual periods beginning after December 15, 2020. While the Company is currently evaluating the impact of the adoption of this standard on its financial statements, the Company anticipates recognition of additional assets and corresponding liabilities related to leases on its balance sheets.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows* (Topic 230): *Classification of Certain Cash Receipts and Cash Payments*. This guidance addresses specific cash flow issues with the objective of reducing the diversity in practice for the treatment of these issues. The areas identified include: debt prepayment or debt extinguishment costs; settlement of zero-coupon debt instruments; contingent consideration payments made after a business combination; proceeds from the settlement of insurance claims; proceeds from the settlement of corporate-owned life insurance policies; distributions received from equity method investees; beneficial interests in

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securitization transactions; and application of the predominance principle with respect to separately identifiable cash flows. The guidance will generally be applied retrospectively and is effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those years. Early adoption is permitted. Effective January 1, 2017, the Company adopted this guidance. The adoption did not have any impact on the Company's financial statements as the Company had no applicable cash receipts or cash payments.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash*. ASU No. 2016-18 requires that a statement of cash flows explain the change during the period in the total cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning and ending balances shown on the statement of cash flows. ASU 2016-18 is effective for fiscal years beginning after December 15, 2017, and interim periods within those years, and early adoption is permitted. ASU 2016-18 must be applied retrospectively to all periods presented. Effective January 1, 2017, the Company early adopted ASU 2016-18, with all adjustments reflected as of the beginning of the fiscal years reported.

In January 2017, the FASB issued ASU No. 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business*. This ASU clarifies the definition of a business when evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The guidance is effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those years. Early adoption is permitted. The Company is currently evaluating the effect that this guidance will have on its financial statements.

In May 2017, the FASB issued ASU 2017-09, *Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting*, which clarifies when to account for a change to the terms or conditions of a share-based payment award as a modification. Under the new guidance, modification accounting is required only if the fair value, the vesting conditions, or the classification of the award (as equity or liability) changes as a result of the change in terms or conditions. For public entities, this standard is effective for fiscal years beginning after December 15, 2016, and interim periods within those fiscal years. Early adoption is permitted. Effective January 1, 2017, the Company early adopted this guidance using the full retrospective transition method. The adoption did not have any impact on the Company's financial statements as the Company had no changes to the terms or conditions of its share-based payment awards.

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3. Cash Equivalents and Marketable Securities

The amortized cost, unrealized gains and losses and fair values of cash equivalents and marketable securities were as follows (in thousands):

Description	December 31, 2016,			Fair Value
	Amortized Cost	Unrealized Gains	Unrealized Losses	
Money market funds	\$ 11,509	\$ —	\$ —	\$11,509
Commercial paper	11,473	—	(1)	11,472
Corporate debt securities	13,627	—	(2)	13,625
	<u>\$ 36,609</u>	<u>\$ —</u>	<u>\$ (3)</u>	<u>\$36,606</u>
Classified as:				
Cash equivalents				\$11,509
Marketable securities				25,097
Total				<u>\$36,606</u>

Description	December 31, 2017			Fair Value
	Amortized Cost	Unrealized Gains	Unrealized Losses	
Money market funds	\$ 27,711	\$ —	\$ —	\$27,711
Commercial paper	32,257	—	(48)	32,209
Corporate debt securities	19,930	—	(26)	19,904
	<u>\$ 79,898</u>	<u>\$ —</u>	<u>\$ (74)</u>	<u>\$79,824</u>
Classified as:				
Cash equivalents				\$32,878
Marketable securities				46,946
Total				<u>\$79,824</u>

As of December 31, 2016 and 2017, the Company had a total of \$37.5 million and \$86.0 million in cash, cash equivalents and marketable securities, which includes \$12.4 million and \$39.0 million in cash and cash equivalents and \$25.1 million and \$46.9 million in marketable securities, respectively.

All marketable securities held as of December 31, 2017, had contractual maturities of less than one year. There have been no realized gains or losses on marketable securities for the periods presented. None of the Company's investments in marketable securities has been in an unrealized loss position for more than one year. The Company determined that it did have the ability and intent to hold all marketable securities that have been in a continuous loss position until maturity or recovery, thus there has been no recognition of any other-than-temporary impairment in the year ended December 31, 2017.

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4. Fair Value Measurements

The Company's financial assets and liabilities subject to fair value measurements on a recurring basis and the level of inputs used in such measurements were as follows (in thousands):

Description	December 31, 2016			
	Total	Level 1	Level 2	Level 3
Money market funds	\$11,509	\$11,509	\$ —	\$ —
Commercial paper	11,472	—	11,472	—
Corporate debt securities	13,625	—	13,625	—
Total	<u>\$36,606</u>	<u>\$11,509</u>	<u>\$25,097</u>	<u>\$ —</u>

Description	December 31, 2017			
	Total	Level 1	Level 2	Level 3
Money market funds	\$27,711	\$27,711	\$ —	\$ —
Commercial paper	32,209	—	32,209	—
Corporate debt securities	19,904	—	19,904	—
Total	<u>\$79,824</u>	<u>\$27,711</u>	<u>\$52,113</u>	<u>\$ —</u>

The Company measures the fair value of money market funds based on quoted prices in active markets for identical securities. Commercial paper and corporate debt securities are valued taking into consideration valuations obtained from third-party pricing services. The pricing services utilize industry standard valuation models, including both income and market-based approaches, for which all significant inputs are observable, either directly or indirectly, to estimate fair value. These inputs include reported trades of and broker/dealer quotes on the same or similar securities, issuer credit spreads; benchmark securities; prepayment/default projections based on historical data; and other observable inputs.

There were no transfers between Level 1 and Level 2 during the periods presented.

5. Property and Equipment, Net

Property and equipment and related accumulated depreciation and amortization are as follows (in thousands):

	December 31,	
	2016	2017
Computer equipment and software	\$ 197	\$ 353
Furniture and fixtures	548	785
Laboratory equipment	4,623	10,515
Leasehold improvements	2,947	2,977
Buildings and related improvements capitalized under a lease financing transaction	—	15,371
	8,315	30,001
Less accumulated depreciation and amortization	(825)	(2,790)
Total property and equipment, net	<u>\$7,490</u>	<u>\$27,211</u>

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Depreciation and amortization expense was \$0.8 million and \$2.0 million for the periods ended December 31, 2016 and 2017, respectively.

6. Commitments and Contingencies

Leases

In November 2015, the Company entered into an 84-month non-cancelable operating lease, effective March 2016, for a new facility in Emeryville, California, with laboratory and office space. The lease agreement includes an escalation clause for increased rent and a renewal provision allowing the Company to extend this lease for an additional three years at the prevailing rental rate.

In February 2016, the Company entered into a 67-month non-cancellable operating lease effective October 2016 for a new facility in Cambridge, Massachusetts, with laboratory and office space. In conjunction with signing the lease, the Company paid a cash security deposit of \$0.3 million. The lease agreement includes an escalation clause for increased rent and a renewal provision allowing the Company to extend this lease for an additional three years at the prevailing rental rate. The lessor provided the Company a tenant improvement allowance for a total of \$2.1 million to complete laboratory and office renovations. The scope of these tenant improvements were considered to be "normal tenant improvements" under the lease accounting guidance. The Company recorded the tenant allowance received as leasehold improvements under the property and equipment account and deferred rent liability on the accompanying balance sheets.

In March 2017, the Company entered into a noncancelable lease (the Pleasanton Lease) to lease 42,620 square feet of office, cleanroom, and laboratory support manufacturing space in Pleasanton, California (the Pleasanton Facility). Subsequently, in April 2017, the Company took possession of the space. The Pleasanton Lease includes a free rent period, escalating rent payments and a term that expires on November 30, 2024. The Company has the option to extend the lease term for a period of five years at the then market rental rate. The Company's obligation to pay rent commenced on December 1, 2017. The Company obtained an irrevocable letter of credit in March 2017 in the initial amount of \$1.0 million as a security deposit to the Pleasanton Lease, which may be drawn down by the landlord in the event the Company fails to fully and faithfully perform all of its obligations. The letter of credit may be reduced based on certain levels of cash and cash equivalents the Company holds. As of December 31, 2017, none of the irrevocable letter of credit amount has been drawn. The Pleasanton Lease further provides that the Company is obligated to pay to the landlord its proportionate share of certain basic operating costs, including taxes and operating expenses.

In connection with the Pleasanton Lease, the Company received a tenant improvement allowance of \$1.2 million from the landlord for the costs associated with the design, development and construction of tenant improvements for the Pleasanton Facility building. The scope of the tenant improvements did not qualify under the lease accounting guidance as "normal tenant improvements" and the Company was deemed owner of the leased building during the construction period for accounting purposes. The Company has therefore capitalized the \$9.3 million fair value of the leased building within property and equipment, net, and recognized a corresponding non-current lease financing obligation in the balance sheet as of December 31, 2017. The fair value of the leased building was estimated using a market approach that utilized comparable observable sales for similar assets (Level 2 inputs). The Company has also recognized building improvements totaling \$6.1 million for additions to the leased building incurred by the Company during the construction period, of which \$1.2 million were due but had not yet

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been received from the landlord as of December 31, 2017 and were recorded as an increase to the lease financing obligation and prepaid and other current assets on the balance sheet. Such amounts were subsequently reimbursed by the landlord in April 2018. In November 2017, construction on the Pleasanton Facility was substantially completed and the leased property was placed into service. The Company determined the completed construction project did not qualify for sale-leaseback accounting due to the collateral held by the landlord in the form of a letter of credit and instead has been accounted for as a financing lease transaction. The leased building for the Pleasanton Facility and related improvements remain on the Company's balance sheet as of December 31, 2017 and rental payments associated with the Pleasanton Lease have been allocated to operating lease expense for the ground underlying the leased building and principal and interest payments on the lease financing obligation.

From March 2017 through December 31, 2017, the Company recorded rent expense associated with the ground lease of approximately \$78,000 in the statements of operations and comprehensive loss. Total interest, which represents the cost of the lease financing obligation under the Pleasanton Lease agreement, was approximately \$64,000 for the year ended December 31, 2017, which was recognized within the statement of operations and comprehensive loss. The allocation of the Pleasanton Lease payment to ground lease rent expense and principal and interest expense on the lease financing obligation was estimated using income and market approaches that utilized comparable observable sales for similar assets, land capitalization rates and an estimate of the Company's incremental borrowing rate (Level 2 and Level 3 inputs).

As of December 31, 2017, minimum annual payments under the Company's non-cancelable lease agreements and lease financing obligation are as follows (in thousands):

	<u>Lease Financing Obligation</u>	<u>Operating Lease</u>
Year ending December 31:		
2018	\$ 708	\$ 1,642
2019	794	1,700
2020	818	1,751
2021	843	1,803
2022	868	1,118
Thereafter	1,737	396
Total minimum payments	<u>5,768</u>	<u>\$ 8,410</u>
Less: Amount representing interest expense	<u>(5,137)</u>	
	631	
Residual value of lease financing obligation	<u>9,896</u>	
	10,527	
Less: Lease financing obligation, short-term	<u>(6)</u>	
Lease financing obligation, long-term	<u>\$ 10,521</u>	

Rent expense was \$2.4 million and \$1.2 million for the years ended December 31, 2016 and 2017, respectively.

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Agreement with CRO

In September 2017, the Company entered into a contract research and development agreement with a third party contract research organization (CRO) to provide research, analysis and antibody samples to further the Company's development of personalized immunotherapies in the treatment of cancer. Under the agreement, the Company paid an upfront payment of \$0.5 million to the CRO. The upfront payment has been capitalized and will be recognized as research and development expense using the straight-line method over the term of the agreement, which is one year. The Company is also obligated to pay up to \$0.4 million to the CRO upon the completion of certain phases of the research services. These costs will be recorded to research and development expense over the expected period of each phase of the research services. The Company is also obligated to pay the CRO certain milestone payments of up to \$36.4 million on achievement of specified events. None of these events had occurred as of December 31, 2017. During 2017, the Company recognized a total of \$0.1 million of research and development expense under the agreement.

Guarantees and Indemnifications

The Company, as permitted under Delaware law and in accordance with its certification of incorporation and bylaws, and pursuant to indemnification agreements with certain of its officers and directors, indemnifies its officers and directors for certain events or occurrences, subject to certain limits, which the officer or director is or was serving at the Company's request in such capacity. The term of the indemnification period lasts as long as an officer or director may be subject to any proceeding arising out of acts or omissions of such officer or director in such capacity. The maximum amount of potential future indemnification is unlimited; however, the Company currently holds director and officer liability insurance. This insurance limits the Company's exposure and may enable it to recover a portion of any future amounts paid. The Company believes that the fair value of these indemnification obligations is minimal. Accordingly, the Company has not recognized any liabilities relating to these obligations for any period presented.

7. License Agreements

Arbutus Biopharma Corporation

In October 2017, the Company entered into an Exclusive License Agreement with Arbutus Biopharma Corporation (Arbutus). Under the license agreement, the Company has a worldwide, exclusive license to certain technology of Arbutus, including Arbutus' portfolio of proprietary and clinically validated lipid nanoparticle products and associated intellectual property, as well as technology transfer of Arbutus' manufacturing know-how. Under this license agreement, the Company paid an upfront payment of \$5.0 million which was included in research and development expenses during 2017. The Company also reimbursed Arbutus for materials and personnel costs totaling \$0.2 million, which were included in research and development expenses during 2017. The Company is obligated to pay Arbutus for services rendered and certain milestone payments up to an aggregate of \$123.5 million on achievement of specified events, and low single-digit royalties on sales of its licensed products. None of these events had occurred as of December 31, 2017 and no royalties were due from the sale of licensed products.

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Non-Profit Hospital Cancer Center

In January 2016, the Company entered into an Exclusive License Agreement with a non-profit hospital cancer center. Under the license agreement, the Company has an exclusive license to utilize certain patents and know-how relating to immunotherapy for an insignificant upfront payment, cash milestone payments on achievement of specified events, and a low single digit royalty on sales of licensed products. The achievement of the milestones and payment of royalties is dependent upon obtaining regulatory approval. None of these events had occurred as of December 31, 2016 or 2017 and no royalties were due from the sales of licensed products. The Company also issued a ten-year warrant to the cancer center for the right to purchase 277,778 shares of its common stock at \$0.05 per share. The estimated fair value of the warrant was not significant and was included in research and development expense and additional paid-in capital. The warrant was exercised in full in January 2018.

8. Balance Sheet Components

Prepaid Expenses and Other Assets

Prepaid expenses and other current assets consist of the following (in thousands):

	December 31,	
	2016	2017
Receivable from landlord	\$ —	\$1,226
Prepaid rent	355	93
Interest receivable and other receivables	171	484
Prepaid research and development-related expenses	244	628
Other	114	95
Total prepaid expenses and other current assets	<u>\$ 884</u>	<u>\$2,526</u>

Accrued Liabilities

Accrued current liabilities consist of the following (in thousands):

	December 31,	
	2016	2017
Deferred rent	\$ 336	\$ 381
Research and development-related expenses	164	683
Other	195	426
Total accrued current liabilities	<u>\$ 695</u>	<u>\$1,490</u>

9. Convertible Preferred Stock and Common Stock

Convertible Preferred Stock

Series A Equity Financing

The Company entered into a Series A preferred stock purchase agreement (Series A Preferred Stock Purchase Agreement), with certain investors on September 18, 2015, and upon approval by the Company's Board of Directors, the Company completed a Series A convertible preferred stock

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financing (Series A—First Tranche) at a price per share of \$1.00. The net cash proceeds from this round of financing totaled \$25.4 million, and 25,525,000 shares of Series A convertible preferred stock were issued. Issuance costs totaled \$0.1 million and were recorded as a reduction of the proceeds.

On April 1, 2016, and upon approval by the Company's Board of Directors, the Company completed a Series A convertible preferred stock financing (Series A—Second Tranche) at a price per share of \$1.00. The net cash proceeds from this round of financing totaled \$35.7 million, and 35,735,000 shares of Series A convertible preferred stock were issued. Issuance costs totaled \$0.02 million and were recorded as a reduction of the proceeds.

Upon approval by the Company's Board of Directors and a majority of the holders of the Series A convertible preferred stock, the Company could proceed with the third closing of the Series A convertible preferred stock for a total of 40,840,000 shares at a purchase price of \$1.00 per share (Series A—Third Tranche). However, for a period of 90 days following such approval, the Company may solicit alternative financing at financially superior terms to those of the Series A—Third Tranche, including a purchase price greater than \$1.00 per share (the Superior Financing Transaction). If approved by the Board of Directors, the Company's obligation to complete the Series A—Third Tranche shall terminate and the Superior Financing Transaction would proceed. Each Series A convertible preferred stockholder will have the right to purchase at least 50% of its original Series A—Third Tranche amount in the Superior Financing Transaction. The Series A—Second Tranche and Series A—Third Tranche rights are considered to be mutual options as neither the purchasers nor the Company have a commitment or obligation to purchase or sell additional shares. As such, these rights are not accounted for separately. In connection with the Company's Series B Equity Financing the Company's Board of Directors and investors terminated the ability to complete the Series A—Third Tranche.

Series B Equity Financing

The Company entered into a Series B preferred stock purchase agreement (Series B Preferred Stock Purchase Agreement), with certain investors on September 6, 2017 and October 20, 2017, and upon approval by the Company's Board of Directors, the Company completed a Series B convertible preferred stock financing (Series B) at a price per share of \$1.56. The net cash proceeds totaled \$95.8 million and 61,543,319 shares of Series B convertible preferred stock were issued. Issuance costs totaled \$0.2 million and were recorded as a reduction of the proceeds.

The preferred stock has various features, including convertibility and non-cumulative dividends. The Company determined that none of the features required bifurcation from the underlying shares, either because they are clearly and closely related to the underlying shares or because they do not meet the definition of a derivative. The Series A and Series B convertible preferred stock are considered permanent equity and have not been accreted up to their redemption value. The Second and Third Tranche rights are considered to be mutual options as neither the purchasers nor the Company have a commitment or obligation to purchase or sell additional shares. As such, these rights are not accounted for separately. Moreover, in any such redemption (i.e. deemed liquidation) all equity holders (common and preferred) will receive the same form of consideration. The preferred stockholders cannot contractually redeem their shares, or redeem their shares through separate negotiation, without the Company's common stockholders being able to also redeem their shares for the same form of consideration.

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At December 31, 2016, convertible preferred stock consisted of the following (in thousands, except share and per share amounts):

	<u>Shares Authorized</u>	<u>Shares Issued and Outstanding</u>	<u>Issuance Price Per Share</u>	<u>Carrying Value</u>	<u>Liquidation Preference</u>
Series A—First Tranche	110,000,000	25,525,000	\$ 1.00	\$25,425	\$ 25,525
Series A—Second Tranche	—	35,735,000	\$ 1.00	35,714	35,735
Total convertible preferred stock	<u>110,000,000</u>	<u>61,260,000</u>		<u>\$61,139</u>	<u>\$ 61,260</u>

At December 31, 2017, convertible preferred stock consisted of the following (in thousands, except share and per share amounts):

	<u>Shares Authorized</u>	<u>Shares Issued and Outstanding</u>	<u>Issuance Price Per Share</u>	<u>Carrying Value</u>	<u>Liquidation Preference</u>
Series B	64,102,551	61,543,319	\$ 1.56	\$ 95,798	\$ 96,008
Series A—First Tranche	110,000,000	25,525,000	\$ 1.00	25,425	25,525
Series A—Second Tranche	—	35,735,000	\$ 1.00	35,714	35,735
Total convertible preferred stock	<u>174,102,551</u>	<u>122,803,319</u>		<u>\$ 156,937</u>	<u>\$ 157,268</u>

The rights, preferences, and privileges of the convertible preferred stock are as follows:

Redemption Rights

The preferred stock is not redeemable by holders unless a redemption event occurs. A redemption event will only occur upon the liquidation or winding up of the Company, a greater than 50% change in control, or the sale of substantially all of the assets of the Company. Management has also elected not to adjust the carrying values of the Series A and Series B convertible preferred stock to the redemption value of such shares, since it is uncertain whether or when a redemption event will occur. Subsequent adjustments to increase the carrying value to the redemption values will be made when it becomes probable that such a redemption will occur.

Dividends Rights

The holders of Series A and Series B convertible preferred stock are entitled to receive dividends, from any assets legally available, prior and in preference to any declaration or payment of any dividend to the common stockholders, at the rate of 8% of the original issue price (as determined on a per annum basis and on an as-converted basis). Such dividends are payable if and when declared by the Board of Directors and are not cumulative. After payment of such dividends, any additional dividends shall be distributed among the holders of the Series A and Series B convertible preferred stock and common stock pro rata based on the number of shares of common stock then held by each holder (assuming conversion of all such preferred stock into common stock). As of December 31, 2016 and 2017, no such dividends had been declared or accrued.

Liquidation Rights

In the event of any liquidation, dissolution, or winding up of the Company, whether voluntary or involuntary (Liquidation Event), the holders of Series B convertible preferred stock are entitled to

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receive, prior and in preference to any distribution of any of the assets of the Company to the holders of the Series A convertible preferred stock, \$1.56 per share (as adjusted for any stock splits, combinations, reorganizations, or similar transactions, plus any declared and unpaid dividends). After payment of the above, the holders of Series A convertible preferred stock are entitled to receive, prior and in preference to any distribution of any of the assets of the Company to the holders of common stock, \$1.00 per share (as adjusted for any stock splits, combinations, reorganizations, or similar transactions, plus any declared and unpaid dividends).

If, upon the occurrence of such an event, the proceeds to be distributed are insufficient to permit the payment to such holders of the full preferential amounts, then the entire amount legally available for distribution shall be distributed among the holders of the Series A and Series B preferred stock in proportion to the full preferential amount that each such holder is otherwise entitled to receive had such proceeds been available.

After liquidation preference payments have been made to the holders of the convertible preferred stock as described above, all of the remaining assets and funds of the Company are to be distributed ratably among the holders of the preferred and common stock, as if the preferred stock had been converted to common stock. However, Series B holders are limited to the greater of (1) \$7.80 per share (as adjusted for any stock splits, combinations, reorganizations or similar transactions) and (2) the amount the holder would have received if all shares of Series B convertible preferred stock had been converted to common stock prior to such liquidation, dissolution, or winding up of the Company. Series A holders are limited to the greater of (1) \$5.00 per share (as adjusted for any stock splits, combinations, reorganizations or similar transactions) and (2) the amount the holder would have received if all shares of Series A convertible preferred stock had been converted to common stock prior to such liquidation, dissolution, or winding up of the Company.

Voting Rights

Except as otherwise required by law, the holders of common and Series A and Series B convertible preferred stock vote together as a single class. The holders of the convertible preferred stock are entitled to the number of votes equal to the number of shares of common stock into which the convertible preferred stock could be converted on the record date for the vote, or upon the written consent of the stockholders.

The holders of the Series A convertible preferred stock are entitled to elect three directors of the Company, the holders of the Series B convertible preferred stock are entitled to elect one director of the Company, and the holders of common stock shall be entitled to elect one director of the Company.

Conversion Rights

Each share of Series A and Series B convertible preferred stock, at the option of the holder and at any time after the date of issuance, is convertible into the number of shares of common stock determined by dividing the respective original issue price by the conversion price (the Conversion Price). At December 31, 2017, the Series A and Series B Conversion Prices are \$1.00 and \$1.56, respectively, and are subject to certain future adjustments.

Conversion occurs at the conversion rate (i) upon the closing of the sale of common stock at a price of at least \$3.12 per share, in a firm commitment underwritten public offering pursuant to an

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effective registration statement under the Securities Act of 1933, as amended, resulting in at least \$50.0 million of net proceeds, or (ii) at the election of (a) the holders of at least a majority of the then-outstanding shares of such Series A preferred stock and (b) the holders of at least a majority of the then-outstanding shares of such Series B preferred stock. Through December 31, 2017, the Company has sufficient authorized and unissued common shares available to settle any conversion event.

Common Stock

The Company is authorized to issue 160,000,000 shares of common stock. Holders of common stock are generally entitled to one vote per share on all matters to be voted upon by the stockholders of the Company.

Subject to the preferences that may be applicable to any outstanding shares of preferred stock, the holders of common stock are entitled to receive ratably such dividends, if any, as may be declared by the Board of Directors. No dividends have been declared to date.

10. Stock-Based Compensation

2015 Equity Incentive Plan

In August 2015, the Board of Directors approved the 2015 Equity Incentive Plan (the Plan). Under the Plan, 20,833,332 shares of common stock have been reserved for the issuance of ISOs, NSOs, stock bonuses, and rights to acquire restricted stock to employees, officers, directors, and consultants of the Company as of December 31, 2017. The Plan allows for the issuance of non-statutory and incentive stock options (ISOs) to employees and non-statutory stock options (NSOs) to non-employees. ISOs and NSOs may be granted with exercise prices at no less than 100% of the fair value of the common stock on the date of grant. Options granted to a 10% stockholder shall be at no less than 110% of the fair value, and ISO stock option grants to such 10% stockholders expire five years from the date of grant. For stock awards granted during 2016 and 2017, deemed fair values of \$0.32 and \$0.46 per common share were used in calculating stock based compensation expense, as determined by management using hindsight.

The Company permits early exercise of certain stock options prior to vesting to certain directors, officers, and employees. Any shares issued pursuant to unvested options are restricted and subject to repurchase by the Company until the conditions for vesting are met. The amounts paid for shares purchased under an early exercise of stock options and subject to repurchase by the Company are reported as a liability, then in stockholders' equity once those shares vest. Upon termination of employment of an option holder, the Company has the right to repurchase, at the original purchase price, any unvested options. The shares issued pursuant to unvested options have not been included in shares issued and outstanding on the balance sheet and statement of stockholders' equity as such shares are not considered outstanding for accounting purposes.

ISOs granted under the Plan generally vest 25% after the completion of 12 months of service, and the balance vests in equal monthly installments over the next 36 months of service and expires 10 years from the grant date, unless subject to provisions regarding 10% stockholders. NSOs vest per the specific agreement and expire 10 years from the date of grant.

The grant date fair value of the Company's common stock has been determined by the Company's Board of Directors with the assistance of management and an independent third-party valuation

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specialist. The grant date fair value of the Company's common stock was determined using valuation methodologies which utilizes certain assumptions including probability weighting of events, volatility, time to liquidation, a risk-free interest rate and an assumption for a discount for lack of marketability (Level 3 inputs). In determining the fair value of the Company's common stock, the methodologies used to estimate the enterprise value of the Company were performed using methodologies, approaches, and assumptions consistent with the American Institute of Certified Public Accountants Accounting and Valuation Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation ("AICPA Accounting and Valuation Guide").

Valuation of Stock Options

The fair value of each stock option granted to an employee or a director was estimated as of the date of grant using the Black-Scholes model with the following weighted-average assumptions:

	<u>Year Ended December 31,</u>	
	<u>2016</u>	<u>2017</u>
Expected dividend yield	—	—
Expected term	6.05 years	6.04 years
Risk-free interest rate	1.43%	1.97%
Expected volatility	103%	94%

Management's calculations are based on a grant date valuation approach. Using the Black-Scholes model, the weighted-average grant-date fair value of employee stock options granted was \$0.32 and \$0.29 per share during the years ended December 31, 2016 and 2017, respectively.

Stock Option Activity

A summary of the stock plan activity is as follows:

	<u>Options Available for Grant</u>	<u>Outstanding Options</u>	<u>Weighted Average Exercise Price</u>
Balances at December 31, 2015	14,280,115	1,793,250	\$ 0.05
Granted	(6,607,500)	6,607,500	0.05
Exercised	—	(4,717,250)	0.05
Forfeited	170,000	(170,000)	0.05
Repurchased	80,000	—	—
Balances at December 31, 2016	<u>7,922,615</u>	<u>3,513,500</u>	0.06
Reserved	2,500,000	—	—
Granted	(6,212,050)	6,212,050	0.16
Exercised	—	(287,500)	0.05
Forfeited	110,000	(110,000)	0.07
Balances at December 31, 2017	<u>4,320,565</u>	<u>9,328,050</u>	

For the years ended December 31, 2016 and 2017, the total intrinsic value of stock option awards exercised was \$1.3 million and \$0.08 million, respectively, determined at the date of option exercise, and the total cash received upon exercise of stock options was \$0.2 million and \$0.01 million,

Gritstone Oncology, Inc.
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respectively. The total intrinsic value of options exercisable was \$0.5 million as of December 31, 2017. The aggregate intrinsic value was calculated as the difference between the exercise prices of the underlying stock option awards and the estimated fair value of the common stock on the date of exercise.

Additional information related to the status of options at December 31, 2016, is as follows:

	Options	Weighted Average Exercise Price per Share	Weighted- average Remaining Contractual Life (Years)
Outstanding	3,513,500	\$ 0.06	9.63
Exercisable	497,000	0.05	9.26
Vested and expected to vest	8,294,915	0.05	9.28

Additional information related to the status of options at December 31, 2017, is as follows:

	Options	Weighted Average Exercise Price per Share	Weighted- Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value (in thousands)
Outstanding	9,328,050	\$ 0.13	9.13	\$ 3,087
Exercisable	1,205,931	0.06	8.59	486
Vested and expected to vest	11,633,110	0.11	8.83	4,113

As of December 31, 2016 and 2017, \$2.3 million and \$2.9 million of total unrecognized compensation cost related to non-vested employee and consultant options is expected to be recognized over a weighted-average period of 3.24 and 2.75 years, respectively. The total fair value of shares vested during the period ended December 31, 2016 and 2017 was \$0.4 million and \$1.1 million, respectively.

During the years ended December 31, 2016 and 2017, NSOs were issued to non-employees to purchase 20,000 and 180,000 shares of common stock for current and future services at weighted-average exercise prices of \$0.11 and \$0.11 per share, respectively. The options were valued using the Black-Scholes model based on the following assumptions: expected term of 9.11 years, risk-free interest rate of 2.25%, volatility of 100%, and no dividend yield. The fair value of these options is expensed over the vesting period. Compensation expense for these awards has not been material for any period presented.

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Stock-Based Compensation Expense

Total stock-based compensation for all options granted to employees and consultants, before taxes is as follows (in thousands):

	<u>Year Ended December 31,</u>	
	<u>2016</u>	<u>2017</u>
Research and development expenses	\$ 385	\$ 888
General and administrative expenses	212	238
Total	<u>\$ 597</u>	<u>\$ 1,126</u>

Liability for Early Exercise of Stock Options

As of December 31, 2016 and 2017, there were 5,784,723 and 3,721,127, respectively, unvested common shares outstanding that were issued upon the early exercise of stock options prior to the vesting of the underlying shares which are subject to repurchase by the Company at the original issuance price upon termination of the stockholders' services. The right to repurchase these shares generally lapses with respect to 25% of the shares underlying the option after one year of service to the Company and 1/48 of the shares underlying the original grant per month for 36 months thereafter. The shares purchased by the employees pursuant to the early exercise of stock options are not deemed, for accounting purposes, to be issued until those shares vest. As of December 31, 2016 and 2017, the Company recorded \$0.3 million and \$0.2 million, respectively, as short-term and long-term liabilities associated with shares issued subject to repurchase rights.

11. Income Taxes

The reconciliation of the statutory federal income tax rate to the Company's effective tax rate is as follows:

	<u>Year Ended December 31,</u>	
	<u>2016</u>	<u>2017</u>
Tax at statutory federal rate	34.00%	34.00%
State tax, net of federal benefit	3.34	2.22
Permanent differences	(0.81)	(2.34)
Change in valuation allowance	(37.32)	(20.70)
Tax reform	—	(17.34)
Research and development tax credits	0.79	4.16
Effective income tax rate	<u>— %</u>	<u>— %</u>

The Company uses the liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial reporting and the tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The Company assesses the likelihood that the resulting deferred tax assets will be realized. A valuation allowance is provided when it is more likely than not that some portion or all of a deferred tax asset will not be realized.

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December 31, 2017

In assessing the realizability of deferred tax assets, the Company considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which the temporary differences representing net future deductible amounts become deductible. Due to the Company's history of losses, and lack of other positive evidence, the Company has determined that it is more likely than not that its net deferred tax assets will not be realized, and therefore, the net deferred tax assets are fully offset by a valuation allowance at December 31, 2016 and 2017. The deferred tax assets were primarily comprised of federal and state tax net operating losses and tax credit carryforwards. The valuation allowance increased by \$7.0 million during 2016 and increased by \$8.5 million during 2017.

The U.S. Tax Cuts and Jobs Act (Tax Act) was enacted on December 22, 2017 and introduces significant changes to U.S. income tax law. Effective in 2018, the Tax Act reduces the U.S. federal statutory corporate tax rate from 35% to 21% for years after 2017. Accordingly, the Company has remeasured its deferred taxes as of December 31, 2017 to reflect the reduced rate that will apply in future periods when these deferred taxes are settled or realized. The Company recognized a reduction to the deferred tax assets of \$7.1 million to reflect the reduced U.S. tax rate of the Tax Act, which was off-set by a corresponding reduction in the valuation allowance.

SAB 118 addresses the application of GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Tax Act and allows the registrant to record provisional amounts during a measurement period not to extend beyond one year of the enactment date. The Company has recognized a net tax benefit of \$7.1 million offset by an equal amount to the valuation allowance for the provisional tax impacts related to the revaluation of deferred tax balances and included this estimate in its financial statements for the year ended December 31, 2017. The Company is in the process of analyzing the impact of the various provisions of the Tax Act. The ultimate impact may differ from the provisional amounts recorded. The Company expects to complete its analysis within the measurement period in accordance with SAB 118.

The components of the net deferred tax assets/liabilities are as follows (in thousands):

	December 31,	
	2016	2017
Deferred tax assets:		
Net operating loss carryforwards	\$ 6,852	\$ 12,251
Research and development tax credits	156	1,990
Lease financing obligation	—	2,490
Accruals and other	1,342	1,124
Amortization	152	1,222
Deferred tax liabilities:		
Other depreciation	(950)	(536)
Leased building depreciation	—	(2,475)
Total deferred tax assets	7,552	16,066
Less valuation allowance	(7,552)	(16,066)
Net deferred tax assets	<u>\$ —</u>	<u>\$ —</u>

Gritstone Oncology, Inc.
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At December 31, 2017, the Company's federal and state income tax net operating loss carryforwards were approximately \$49.9 million and \$25.8 million, respectively, which may be subject to limitations as described below. If not utilized, the federal tax loss carryforwards will begin to expire in 2035 and the state tax loss carryforwards will begin to expire in 2035. Under the newly enacted federal income tax law, federal net operating losses incurred in 2018 and in future years may be carried forward indefinitely, but the deductibility of such federal net operating losses is limited. It is uncertain if and to what extent various states will conform to the newly enacted federal income tax law. In addition, the Company has federal and certain California and Massachusetts research and development income tax credit carryforwards of \$1.9 million, \$1.0 million and \$0.4 million, respectively. If not utilized, the federal research and development income tax credit carryforwards will begin to expire in 2035. The California research and development income tax credit carryforwards do not expire and can be carried forward indefinitely. The Massachusetts research and development income tax credit carryforwards will begin to expire in 2030. Due to the net operating loss carryforwards, all years remain open for income tax examination by tax authorities in the United States, various states and foreign tax jurisdictions in which the Company files tax returns.

The net operating loss (NOL) and tax credit carryforwards are subject to review and possible adjustment by the Internal Revenue Service and state tax authorities and may become subject to an annual limitation in the event of certain cumulative changes in the ownership interest of significant stockholders over a three-year period in excess of 50%, as defined under Sections 382 and 383 of the Internal Revenue Code of 1986. This could limit the amount of tax attributes that can be utilized annually to offset future taxable income or tax liabilities. Subsequent ownership changes may further affect the limitation in future years. The Company is in the process of completing an analysis through December 31, 2017 under Internal Revenue Service Code (IRC) Sections 382 and 383 to determine if the Company's net operating loss carryforwards and research and development credits are limited due to a change in ownership. The Company does not believe it has experienced an ownership change pursuant to Section 382, and as a result, does not expect to reduce its federal net operating loss or research and development credit carryforwards.

The following table summarizes the activity related to the Company's unrecognized tax benefits (in thousands):

	<u>December 31,</u>	
	<u>2016</u>	<u>2017</u>
Beginning of year—unrecognized tax benefits	\$ 7	\$ 230
Decrease for tax positions taken during prior periods	—	(47)
Increases for tax positions taken during current period	223	906
End of year—unrecognized tax benefits	<u>\$ 230</u>	<u>\$1,089</u>

The Company does not expect any material changes to the estimated amount of liability associated with its uncertain tax positions within the next 12 months.

The Company files income tax returns in the U.S. federal jurisdiction and various state jurisdictions. The Company is not currently under audit by the Internal Revenue Service or other similar state or local authorities. All tax years of the Company remain open to examination by major taxing jurisdictions to which the Company is subject.

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12. Net Loss and Unaudited Pro Forma Net Loss Per Share

The following table sets forth the computation of the basic and diluted net loss per share (in thousands, except for per share amounts):

	Year Ended December 31,	
	2016	2017
Numerator:		
Net loss	\$ (18,750)	\$ (41,377)
Denominator:		
Weighted-average common shares outstanding, basic and diluted	11,540,581	13,793,417
Net loss per share, basic and diluted	<u>\$ (1.62)</u>	<u>\$ (3.00)</u>

Since the Company was in a loss position for all periods presented, basic net loss per share is the same as diluted net loss per share for all periods as the inclusion of all potential common shares outstanding would have been anti-dilutive. Potentially dilutive securities that were not included in the diluted per share calculations because they would be anti-dilutive were as follows:

	December 31,	
	2016	2017
Series A—First Tranche convertible preferred stock	25,525,000	25,525,000
Series A—Second Tranche convertible preferred stock	35,735,000	35,735,000
Series B convertible preferred stock	—	61,543,319
Options issued and outstanding	3,513,500	9,328,050
Early exercised common stock subject to future vesting	5,784,721	3,721,105
Warrants to purchase common stock	277,778	277,778
Total	<u>70,835,999</u>	<u>136,130,252</u>

Unaudited Pro Forma Net Loss Per Share

The following table sets forth the computation of the Company's unaudited pro forma basic and diluted net loss per share (in thousands, except share and per share amounts):

	Year ended December 31, 2017
Net loss	<u>\$ (41,377)</u>
Shares used in computing net loss per share, basic and diluted	13,793,417
Pro forma adjustment to reflect assumed conversion of preferred stock	80,736,443
Shares used to compute pro forma net loss per share, basic and diluted	<u>94,529,860</u>
Pro forma net loss per share, basic and diluted	<u>\$ (0.44)</u>

13. Related-Party Transactions

During the year ended December 31, 2016, the Company issued 29,230,250 shares of Series A convertible preferred stock for total proceeds of \$29.2 million to certain stockholders, a member of the

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December 31, 2017

Company's Board of Directors and immediate family members of certain executive officers of the Company, that are in each case considered to be related parties. During the year ended December 31, 2017, the Company issued 17,666,407 additional shares of Series B convertible preferred stock for total proceeds of \$27.6 million to these related parties.

14. Defined Contribution Plan

The Company began sponsoring a 401(k) Plan in 2017 that stipulates that eligible employees can elect to contribute to the 401(k) Plan, subject to certain limitations, on a pretax basis. The Company matches up to 50% of the first 4% of each employee's contribution. During the year ended December 31, 2017, expenses recognized for the 401(k) Plan were insignificant.

Gritstone Oncology, Inc.
Condensed Balance Sheets
(In thousands, except share amounts)

	<u>December 31,</u> <u>2017</u>	<u>June 30,</u> <u>2018</u> <u>(Unaudited)</u>	<u>Pro Forma</u> <u>Stockholders'</u> <u>Equity as of</u> <u>June 30,</u> <u>2018</u> <u>(Unaudited)</u>
Assets			
Current assets:			
Cash and cash equivalents	\$ 39,007	\$ 37,541	
Marketable securities	46,946	26,949	
Prepaid expenses and other current assets	<u>2,526</u>	<u>2,392</u>	
Total current assets	88,479	66,882	
Property and equipment, net	27,211	27,533	
Deposits and other long-term assets	<u>1,610</u>	<u>1,536</u>	
Total assets	<u>\$ 117,300</u>	<u>\$ 95,951</u>	
Liabilities and stockholders' equity			
Current liabilities:			
Accounts payable	\$ 3,935	\$ 2,671	
Accrued compensation	2,227	1,793	
Accrued liabilities	<u>1,490</u>	<u>721</u>	
Total current liabilities	7,652	5,185	
Deferred rent, net of current portion	1,749	1,543	
Other non-current liabilities	96	43	
Lease financing obligation, net of current portion	<u>10,521</u>	<u>10,508</u>	
Total liabilities	<u>20,018</u>	<u>17,279</u>	
Commitments and contingencies (Note 6)			
Stockholders' equity:			
Convertible preferred stock, \$0.001 par value; 125,362,551 and 139,228,319 shares authorized at December 31, 2017 and June 30, 2018 (unaudited), respectively; 122,803,319 and 127,565,223 shares issued and outstanding at December 31, 2017 and June 30, 2018 (unaudited), respectively; aggregate liquidation preference of \$157,268 and \$166,268 at December 31, 2017 and June 30, 2018 (unaudited), respectively; no shares issued and outstanding pro forma (unaudited)	156,937	165,865	\$ —
Common stock, \$0.0001 par value; 160,000,000 and 175,250,000 shares authorized at December 31, 2017 and June 30, 2018 (unaudited), respectively; 14,852,480 and 16,619,601 shares issued and outstanding at December 31, 2017 and June 30, 2018 (unaudited), respectively; 144,154,824 shares issued and outstanding, pro forma (unaudited)	1	2	14
Additional paid-in capital	2,045	3,311	169,164
Accumulated other comprehensive loss	(74)	(31)	(31)
Accumulated deficit	<u>(61,627)</u>	<u>(90,475)</u>	<u>(90,475)</u>
Total stockholders' equity	97,282	78,672	<u>\$ 78,672</u>
Total liabilities and stockholders' equity	<u>\$ 117,300</u>	<u>\$ 95,951</u>	

See accompanying notes to condensed financial statements.

Gritstone Oncology, Inc.
Condensed Statements of Operations and Comprehensive Loss
(Unaudited)

(In thousands, except share and per share amounts)

	Six Months Ended June 30,	
	2017	2018
Operating expenses:		
Research and development	\$ 11,855	\$ 24,090
General and administrative	2,840	4,852
Total operating expenses	<u>14,695</u>	<u>28,942</u>
Loss from operations	<u>(14,695)</u>	<u>(28,942)</u>
Interest income, net	138	94
Net loss	<u>(14,557)</u>	<u>(28,848)</u>
Other comprehensive loss:		
Unrealized loss on marketable securities, net of tax	<u>(2)</u>	<u>(31)</u>
Comprehensive loss	<u>\$ (14,559)</u>	<u>\$ (28,879)</u>
Net loss per share, basic and diluted	<u>\$ (1.11)</u>	<u>\$ (1.83)</u>
Weighted average number of shares used in computing net loss per share, basic and diluted	<u>13,156,419</u>	<u>15,772,769</u>
Pro forma net loss per share, basic and diluted		<u>\$ (0.21)</u>
Weighted average number of shares used in computing pro forma net loss per share, basic and diluted		<u>138,628,706</u>

See accompanying notes to condensed financial statements.

Gritstone Oncology, Inc.
Condensed Statements of Cash Flows
(Unaudited)
(In thousands)

	Six Months Ended June 30,	
	2017	2018
Operating activities		
Net loss	\$ (14,557)	\$ (28,848)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	846	1,882
Net amortization of premiums and discounts on marketable securities	(46)	(180)
Stock-based compensation	506	1,173
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(218)	415
Deposits and other long term assets	172	74
Accounts payable	122	(177)
Accrued compensation	108	(434)
Accrued and other non-current liabilities	144	(765)
Deferred rent	(115)	(206)
Net cash used in operating activities	<u>(13,038)</u>	<u>(27,066)</u>
Investing activities		
Purchase of marketable securities	(16,302)	—
Maturities of marketable securities	26,867	20,220
Purchase of property and equipment	(3,695)	(2,857)
Net cash provided by investing activities	<u>6,870</u>	<u>17,363</u>
Financing activities		
Proceeds from issuance of common stock under equity incentive plan	14	24
Payments of deferred IPO costs	—	(779)
Proceeds from issuance of convertible preferred stock, net of issuance costs	—	8,992
Net cash provided by financing activities	<u>14</u>	<u>8,237</u>
Net decrease in cash, cash equivalents and restricted cash	(6,154)	(1,466)
Cash, cash equivalents and restricted cash at beginning of period	12,410	39,999
Cash, cash equivalents and restricted cash at end of period	<u>\$ 6,256</u>	<u>\$ 38,533</u>
Supplemental disclosures of non-cash investing and financing information		
Property and equipment purchases accrued but not yet paid	<u>\$ 709</u>	<u>\$ 247</u>
Assets acquired under leasing obligations	<u>\$ 9,300</u>	<u>\$ —</u>
Receivable for lessor funded financing	<u>\$ 1,226</u>	<u>\$ —</u>
Deferred IPO costs included in accrued liabilities and accounts payable	<u>\$ —</u>	<u>\$ 345</u>

See accompanying notes to condensed financial statements.

Gritstone Oncology, Inc.
Notes to Unaudited Interim Condensed Financial Statements

1. Organization and Description of Business

Gritstone Oncology, Inc. (the Company) is an immune-oncology company developing personalized cancer immunotherapies to fight multiple cancer types. The Company was incorporated in the state of Delaware on August 5, 2015, and is based in Emeryville, California and Cambridge, Massachusetts, with a manufacturing facility in Pleasanton, California. The Company operates in one segment.

2. Summary of Significant Accounting Policies

Basis of Presentation

The Company's financial statements have been prepared in accordance with United States generally accepted accounting principles (U.S. GAAP).

Unaudited Interim Condensed Financial Statements

The interim condensed balance sheet as of June 30, 2018, and the statements of operations and comprehensive loss, and cash flows for the six months ended June 30, 2017 and 2018 are unaudited. The unaudited interim condensed financial statements have been prepared on the same basis as the annual financial statements and reflect, in the opinion of management, all adjustments of a normal and recurring nature that are necessary for the fair presentation of the Company's financial position as of June 30, 2018 and its results of operations and cash flows for the six months ended June 30, 2017 and 2018. The financial data and the other financial information disclosed in these notes to the notes to the condensed financial statements related to the six-month periods are also unaudited. The results of operations for the six months ended June 30, 2018 are not necessarily indicative of the results to be expected for the year ended December 31, 2018 or for any other future annual or interim period. The condensed balance as of December 31, 2017 included herein was derived from the audited financial statements as of that date. Certain information and footnote disclosures normally included in annual financial statements prepared in accordance with GAAP have been condensed or omitted. Therefore, these interim condensed financial statements should be read in conjunction with the Company's audited financial statements included elsewhere in this prospectus.

Unaudited Pro Forma Information

Immediately prior to the completion of this offering, all outstanding shares of convertible preferred stock will convert into common stock. Unaudited pro forma condensed balance sheet information as of June 30, 2018 assumes the conversion of all outstanding convertible preferred stock into shares of common stock. The shares of common stock issuable and the proceeds expected to be received in the initial public offering ("IPO") are excluded from such pro forma financial information. Pro forma basic and diluted net loss per share has been computed to give effect to the conversion of all outstanding convertible preferred stock into shares of common stock. The unaudited pro forma net loss per share for the six months ended June 30, 2018 was computed using the weighted-average number of shares of common stock outstanding, including the pro forma effect of the conversion of all outstanding shares of convertible preferred stock into shares of common stock, as if such conversion had occurred at the beginning of the period, or their issuance dates if later. Pro forma net loss per share does not include the shares expected to be sold and related proceeds to be received from the IPO.

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Notes to Unaudited Interim Condensed Financial Statements

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities as of the date of the financial statements and the reported amounts of expenses during the reporting period. On an ongoing basis, management evaluates its estimates, including those related to preclinical study trial accruals, fair value of assets and liabilities, the fair value of leased buildings and other assumptions associated with lease financing transactions, and the fair value of common stock and stock-based compensation. Management bases its estimates on historical experience and on various other market-specific and relevant assumptions that management believes to be reasonable under the circumstances. Actual results could differ from those estimates.

Going Concern

The Company has incurred significant losses and negative cash flows from operations since its inception and had an accumulated deficit of \$90.5 million at June 30, 2018 and does not expect to experience positive cash flows in the foreseeable future.

As of June 30, 2018, the Company had \$64.5 million in cash, cash equivalents and marketable securities and working capital of \$61.7 million. From July to August 2018, the Company sold 6,358,021 shares of Series C convertible preferred stock at a price of \$1.89 per share for net cash proceeds of \$12.0 million. See Note 8 for a discussion of the Series C convertible preferred stock financing. In August 2018, the Company also received a non-refundable upfront fee of \$20.0 million as consideration for entering into a collaboration agreement (see Note 11). Management expects to incur additional losses in the future to conduct product research and development and to conduct pre-commercialization activities and recognizes the need to raise additional capital to fully implement its business plan. The Company intends to raise such capital through the sale of convertible stock, additional equity, debt financings or strategic alliances with third parties. However, there can be no assurance that the Company will be successful in acquiring additional funding at levels sufficient to fund its operations or on terms acceptable to the Company. These conditions raise substantial doubt about the Company's ability to continue as a going concern for a period of one year from the date of the issuance of these condensed financial statements. If the Company is unsuccessful in its efforts to raise additional financing, the Company could be required to significantly reduce operating expenses and delay, reduce the scope of or eliminate some of its development programs or its future commercialization efforts, out-license intellectual property rights to its product candidates and sell unsecured assets, or a combination of the above, any of which may have a material adverse effect on the Company's business, results of operations, financial condition and/or its ability to fund its scheduled obligations on a timely basis or at all. The accompanying financial statements have been prepared assuming that the Company will continue as a going concern, which contemplates the realization of assets and the settlement of liabilities and commitments in the normal course of business. The condensed financial statements do not reflect any adjustments relating to the recoverability and classification of assets or the amounts and classification of liabilities that might be necessary if the Company is unable to continue as a going concern.

Other Risks and Uncertainties

The Company is subject to a number of risks similar to those of other preclinical-stage immunotherapy companies, including dependence on key individuals; the need to develop commercially viable therapeutics; competition from other companies, many of which are larger and better capitalized; and the need to obtain adequate additional financing to fund the development of its

Gritstone Oncology, Inc.
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products. The Company currently depends on third-party suppliers for key materials and services used in its research and development manufacturing process, and is subject to certain risks related to the loss of these third-party suppliers or their inability to supply the Company with adequate materials and services.

Fair Value of Financial Instruments

Accounting Standards Codification Topic (ASC) 820, *Fair Value Measurement*, establishes a fair value hierarchy for instruments measured at fair value that distinguishes between assumptions based on market data (observable inputs) and the Company's own assumptions (unobservable inputs). Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing the asset or liability, and are developed based on the best information available in the circumstances.

ASC 820 identifies fair value as the exchange price, or exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As a basis for considering market participant assumptions in fair value measurements, ASC 820 establishes a three-tier fair value hierarchy that distinguishes between the following:

- Level 1 inputs are quoted prices in active markets that are accessible at the market date for identical assets or liabilities.
- Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3 inputs are unobservable inputs that reflect the Company's own assumptions about the assumptions market participants would use in pricing the assets or liability. Financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement.

To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value instrument.

The carrying amounts reflected on the balance sheets for cash and cash equivalents, prepaid expenses and other current assets, accounts payable, accrued compensation and accrued liabilities approximate their fair values due to their short-term nature.

Cash, Cash Equivalents, and Restricted Cash

Cash equivalents, which consist primarily of highly liquid investments with maturities of three months or less when purchased, are stated at cost which approximates fair value. These assets include investments in money market funds that invest in U.S. Treasury obligations and certificates of deposit which are stated at fair value.

The Company has issued a letter of credit under a lease agreement which has been collateralized by a cash deposit for an equal amount and is recorded within deposits and other long-term assets on the balance sheet based on the term of the underlying lease. The following table provides a

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reconciliation of cash, cash equivalents and restricted cash reported within the balance sheets that sum to the total of the same amounts shown in the statements of cash flows (in thousands).

	December 31, 2017	June 30, 2018
Cash and cash equivalents	\$ 39,007	\$37,541
Restricted cash	992	992
Total, cash, cash equivalents and restricted cash	<u>\$ 39,999</u>	<u>\$38,533</u>

Deferred IPO Costs

Deferred IPO costs of \$1.1 million are capitalized and included with prepaid expenses and other current assets on the condensed balance sheet as of June 30, 2018. There were no deferred IPO costs as of December 31, 2017. The deferred IPO costs will be offset against proceeds from the IPO upon the consummation of the IPO. In the event the IPO is terminated, all capitalized deferred IPO costs will be expensed.

Marketable Securities

The Company invests its excess cash in investment grade short-term fixed income securities. Such investments in marketable securities are considered available for sale, and reported at fair value with unrealized gains and losses included as a component of accumulated other comprehensive income (loss). Marketable securities with original maturities of greater than 90 days from the date of purchase but less than one year from the balance sheet date are classified as short-term, while marketable securities with maturities in one year or beyond one year from the balance sheet date are classified as long term. The amortized cost of debt securities is adjusted for amortization of premiums and accretion of discounts to maturity, which is included in interest income on the statements of operations and comprehensive loss. Realized gains and losses and declines in value judged to be other than temporary, if any, on available-for-sale securities are included in interest and other income (expense), net. The cost of securities sold is determined using specific identification method.

The Company periodically evaluates whether declines in fair values of its marketable securities below their book value are other than temporary. This evaluation consists of several qualitative and quantitative factors regarding the severity and duration of the unrealized loss as well as the Company's ability and intent to hold the marketable security until a forecasted recovery occurs. Additionally, the Company assesses whether it has plans to sell the security or it is more likely than not it will be required to sell any marketable securities before recovery of its amortized cost basis. Factors considered include quoted market prices, recent financial results and operating trends, implied values from any recent transactions or offers of investee securities, credit quality of debt instrument issuers, other publicly available information that may affect the value of the marketable security, duration and severity of the decline in value, and the Company's strategy and intentions for holding the marketable security. To date the Company has not recorded any impairment charges on its marketable securities related to other-than-temporary declines in market value.

Property and Equipment, Net

Property and equipment are stated at cost, less accumulated depreciation and amortization. Maintenance and repairs that do not improve or extend the lives of the respective assets are expensed to operations as incurred.

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Depreciation is calculated using the straight-line method over the estimated useful lives of the respective assets, which are as follows:

<u>Asset</u>	<u>Estimated Useful Life</u>
Computer equipment and software	3 to 5 years
Furniture and fixtures	5 years
Laboratory equipment	5 to 7 years
Leasehold improvements	Shorter of useful life or lease term

Property and equipment includes a leased building which did not meet the sale-leaseback criteria and was recorded at its fair value plus the cost of improvements made during the construction period. The building is being depreciated to a residual value over the lease term whereby the book value of the building will not be greater than the remaining lease financing obligation when the lease ends (see Note 6).

Stock-Based Compensation

The Company measures and recognizes compensation expense for all stock-based awards made to employees and directors based on the grant date estimated fair value of each award. Such expense is recognized on a straight-line basis over the requisite service period which is generally the vesting period for the entire award. Expense is adjusted for estimated forfeitures. Forfeitures of awards are estimated based on historical forfeiture experience and the experience of other companies in the same industry. The estimate of forfeitures will be adjusted over the service period to the extent that actual forfeitures differ, or are expected to differ, from prior estimates.

The valuation model used for calculating the fair value of awards for stock compensation expense is the Black-Scholes option-pricing model (the Black-Scholes model). The Black-Scholes model requires management to make assumptions and judgments about the variables used in the calculation, including the expected term (weighted average period of time that the options granted are expected to be outstanding), the expected volatility of common stock, an assumed risk-free interest rate, and expected dividends the Company may pay. Management uses the simplified calculation of the expected term. Volatility is based on an average of the historical volatilities of the common stock of entities with characteristics similar to the Company's. The risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant for periods corresponding with the expected life of the option. The Company uses an assumed dividend yield of zero as the Company has never paid dividends and has no current plans to pay any dividends on its common stock.

Management recognizes stock-based compensation expense for stock options granted to non-employees based on the estimated fair value of the award on the measurement dates using the Black-Scholes model. The estimated fair value of options granted to non-employees is re-measured at each reporting period using the Black-Scholes model until the awards vest and the resulting change in value, if any, is recognized in the statement of operations and comprehensive loss.

Research and Development Expenses

All research and development costs, including work performed by third parties, are expensed as incurred. Research and development costs consist of salaries and other personnel-related expenses, including associated stock-based compensation, consulting fees, laboratory supplies, and facility costs, as well as fees paid to other entities that conduct certain research and development activities on behalf of the Company. Costs to develop the Company's technologies are recorded as research and

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development expense unless certain costs which meet the criteria to be capitalized as internal-use software costs is met. Payments made prior to the receipt of goods or services to be used in research and development are capitalized until the goods are received or services are rendered.

The Company has and may continue to enter into license agreements to access and utilize certain technology. In each case, the Company evaluates of the license agreement results in the acquisition of an asset or a business. To date, none of the Company's license agreements have been considered to be acquisitions of businesses. For asset acquisitions, the upfront payments to acquire such licenses, as well as any future milestone payments, are immediately recognized as research and development expense when paid, provided that there is no alternative future use of the rights in other research and development projects. These license agreements may also include contingent consideration in the form of cash payments to be made for future milestone events. The Company assess whether such contingent consideration meets the definition of a derivative and to date the Company has determined that such contingent consideration are not derivatives.

Pre-clinical costs are a component of research and development expenses. The Company accrues and expenses pre-clinical trial activities performed by third parties based upon actual work completed in accordance with agreements established with its service providers. The Company determines the actual costs through discussions with internal personnel and external service providers as to the progress or stage of completion of services and the agreed-upon fee to be paid for such services.

Leases and Deferred Rent and Lease Financing Obligation

The Company rents its office space and facilities under non-cancelable operating lease agreements and recognizes related rent expense on a straight-line basis over the term of the lease. The Company's lease agreements contain rent holidays, scheduled rent increases, and renewal options. Rent holidays and scheduled rent increases are included in the determination of rent expense to be recorded ratably over the lease term. The Company does not assume renewals in its determination of the lease term unless they are deemed to be reasonably assured at the inception of the lease. The Company begins recognizing rent expense on the date that it obtains the legal right to use and control the leased space. Deferred rent consists of the difference between cash payments and the recognition of rent expense on a straight-line basis for the buildings the Company occupies.

Funding of leasehold improvements by the Company's landlord is accounted for as a tenant improvement allowance and recorded as current and non-current deferred rent liabilities and amortized on a straight-line basis as a reduction of rent expense over the term of the lease.

In certain arrangements, the Company is involved in the construction of improvements to buildings it is leasing. To the extent the Company is involved with the structural improvements of the construction project or takes construction risk, the Company is considered to be the owner of the building and related improvements for accounting purposes during the construction period. The Company records the fair value of the building and related improvements subject to the lease within property and equipment on the balance sheet. The Company also records a corresponding lease financing obligation on its balance sheet representing the amounts financed by the lessor for the building and lessor financed improvements. Once a construction project is complete, the Company considers the requirements for sale-leaseback accounting treatment. If the Company concludes the arrangement does not qualify for sale-leaseback accounting treatment, the building and improvements remain on the Company's balance sheet and are subject to depreciation and assessing for impairment.

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For such arrangements, at both pre and post the construction period, the Company bifurcates its lease payments into a portion allocated to the building and a portion allocated to the parcel of land on which the building has been built. The portion of the lease payments allocated to the land is treated for accounting purposes as operating lease payments, and therefore is recorded as rent expense in the statements of operations and comprehensive loss. The portion of the lease payments allocated to the building is further bifurcated into a portion allocated to interest expense and a portion allocated to reduce the lease financing obligation. The interest rate used for the lease financing obligation represents the Company's estimated incremental borrowing rate at the inception of the lease, adjusted to reduce any built in loss.

Comprehensive Loss

Comprehensive loss includes net loss and certain changes in stockholders' equity that are excluded from net loss, primarily unrealized losses on the Company's marketable securities.

Net Loss per Share

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of shares of common stock outstanding during the period, without consideration for common stock equivalents. Diluted net loss per share is the same as basic net loss per share, since the effects of potentially dilutive securities are antidilutive given the net loss for each period presented.

Recent Accounting Pronouncements

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. ASU 2016-02 amends a number of aspects of lease accounting, including requiring lessees to recognize almost all leases with a term greater than one year as a right-of-use asset and corresponding liability, measured at the present value of the lease payments. Subsequent measurement, including the presentation of expenses and cash flows, will depend on the classification of the lease as either a finance or an operating lease. Initial costs directly attributable to negotiating and arranging the lease will be included in the asset. For public entities, this standard is effective for annual reporting periods beginning after December 31, 2018, including interim periods within that reporting period. Originally, entities were required to adopt ASU 2016-02 using a modified retrospective approach, which required prior periods to be presented under this new standard with various practical expedients allowed. In July 2018, the Financial Accounting Standards Board ("FASB") issued ASU 2018-11, *Leases (Topic 842): Targeted Improvements*, which now allows entities the option of recognizing the cumulative effect of applying the new standard as an adjustment to the opening balance of retained earnings in the year of adoption (January 1, 2019) while continuing to present all prior periods under previous lease accounting guidance. While the Company is currently evaluating the impact of the adoption of this standard on its financial statements and related disclosures, the Company anticipates recognition of additional assets and corresponding liabilities related to leases on its balance sheets, expanded footnote disclosures and potential changes to how the Company has accounted for its Pleasanton Lease.

In January 2017, the FASB issued ASU 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business*. This ASU clarifies the definition of a business when evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The Company adopted ASU 2017-01 effective January 1, 2018. The adoption of this accounting standards update did not have a material impact on the Company's condensed financial statements.

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ASU 2018-07, Compensation—Stock Compensation (Topic 718) is intended to reduce cost and complexity and to improve financial reporting for share-based payments issued to non-employees (for example, service providers, external legal counsel, suppliers, etc.). The ASU expands the scope of Topic 718, Compensation—Stock Compensation, which currently only includes share-based payments issued to employees, to also include share-based payments issued to non-employees for goods and services. Consequently, the accounting for share-based payments to non-employees and employees will be substantially aligned. ASU 2018-07 is effective for annual and interim periods beginning after December 15, 2018. Early adoption of the standard is permitted. The standard will be applied in a retrospective approach for each period presented. The Company is currently evaluating the timing and impact of adopting this accounting standard update on its condensed financial statements and related disclosures.

On December 22, 2017, the U.S. federal government enacted the Tax Cuts and Jobs Act (“the Act”). The Tax Act contains, among other things, significant changes to corporate taxation, including reduction of the corporate tax rate from a top marginal rate of 35% to a flat rate of 21% for tax years beginning after December 31, 2017, limitation of the deduction for net operating losses to 80% of current year taxable income and elimination of net operating loss carrybacks, implementing a territorial tax system, and requiring a mandatory one-time tax on U.S. owned undistributed foreign earnings and profits known as the transition tax. In December 2017, SEC staff issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act (“SAB 118”) to address the accounting implications of recently enacted U.S. federal tax reform. SAB 118 allows companies to record provisional amounts during a measurement period not to extend beyond one year of the enactment date to address ongoing guidance and tax interpretations that are expected over the next 12 months. The Company has adopted SAB 118 and currently considers its accounting of the impact of U.S. federal tax reform to be incomplete but continues to make a reasonable estimate of the effects on our existing deferred tax assets. The Company expects to complete the remainder of the analysis within the measurement period in accordance with SAB 118. Adjustments, if any, are not expected to impact the statement of operations and comprehensive loss due to the full valuation allowance on the Company’s deferred tax assets.

3. Cash Equivalents and Marketable Securities

The amortized cost, unrealized gains and losses and fair values of cash equivalents and marketable securities were as follows (in thousands):

Description	December 31, 2017			Fair Value
	Amortized Cost	Unrealized Gains	Unrealized Losses	
Money market funds	\$ 27,711	\$ —	\$ —	\$27,711
Commercial paper	32,257	—	(48)	32,209
Corporate debt securities	19,930	—	(26)	19,904
	<u>\$ 79,898</u>	<u>\$ —</u>	<u>\$ (74)</u>	<u>\$79,824</u>
Classified as:				
Cash equivalents				\$32,878
Marketable securities				<u>46,946</u>
				<u>\$79,824</u>

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Description	June 30, 2018,			Fair Value
	Amortized Cost	Unrealized Gains	Unrealized Losses	
Money market funds	\$ 21,535	\$ —	\$ —	\$21,535
Commercial paper	18,468	—	(11)	18,457
Corporate debt securities	8,512	—	(20)	8,492
	<u>\$ 48,515</u>	<u>\$ —</u>	<u>\$ (31)</u>	<u>\$48,484</u>
Classified as:				
Cash equivalents				\$21,535
Marketable securities				<u>26,949</u>
				<u>\$48,484</u>

As of December 31, 2017 and June 30, 2018, the Company had a total of \$86.0 million and \$64.5 million in cash, cash equivalents and short-term marketable securities, which includes \$39.0 million and \$37.6 million in cash and cash equivalents and \$46.9 million and \$26.9 million in short-term marketable securities, respectively.

All marketable securities held as of June 30, 2018, had contractual maturities of less than one year. There have been no realized gains or losses on marketable securities for the periods presented. None of the Company's investments in marketable securities has been in an unrealized loss position for more than one year. The Company determined that it did have the ability and intent to hold all marketable securities that have been in a continuous loss position until maturity or recovery, thus there has been no recognition of any other-than-temporary impairment in the six months ended June 30, 2018.

4. Fair Value Measurements

The Company's financial assets and liabilities subject to fair value measurements on a recurring basis and the level of inputs used in such measurements were as follows (in thousands):

Description	December 31, 2017			
	Total	Level 1	Level 2	Level 3
Money market funds	\$27,711	\$27,711	\$ —	\$ —
Commercial paper	32,209	—	32,209	—
Corporate debt securities	19,904	—	19,904	—
	<u>\$79,824</u>	<u>\$27,711</u>	<u>\$52,113</u>	<u>\$ —</u>

Description	June 30, 2018			
	Total	Level 1	Level 2	Level 3
Money market funds	\$21,535	\$21,535	\$ —	\$ —
Commercial paper	18,457	—	18,457	—
Corporate debt securities	8,492	—	8,492	—
	<u>\$48,484</u>	<u>\$21,535</u>	<u>\$26,949</u>	<u>\$ —</u>

The Company measures the fair value of money market funds based on quoted prices in active markets for identical securities. Commercial paper and corporate debt securities are valued taking into

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consideration valuations obtained from third-party pricing services. The pricing services utilize industry standard valuation models, including both income and market-based approaches, for which all significant inputs are observable, either directly or indirectly, to estimate fair value. These inputs include reported trades of and broker/dealer quotes on the same or similar securities, issuer credit spreads; benchmark securities; prepayment/default projections based on historical data; and other observable inputs.

There were no transfers between Level 1 and Level 2 during the periods presented.

5. Property and Equipment, Net

Property and equipment and related accumulated depreciation and amortization are as follows (in thousands):

	December 31, 2017	June 30, 2018
Computer equipment and software	\$ 353	\$ 403
Furniture and fixtures	785	809
Laboratory equipment	10,515	12,605
Leasehold improvements	2,977	3,017
Buildings and improvements capitalized under lease financing transaction	15,371	15,371
	30,001	32,205
Less accumulated depreciation and amortization	(2,790)	(4,672)
	<u>\$ 27,211</u>	<u>\$27,533</u>

Depreciation and amortization expense was \$0.9 million for the six month period ended June 30, 2017, and \$1.9 million for the six month period ended June 30, 2018.

6. Commitments and Contingencies

Leases

In November 2015, the Company entered into an 84-month non-cancelable operating lease, effective March 2016, for a new facility in Emeryville, California, with laboratory and office space. In conjunction with signing the lease, the Company paid a cash security deposit of \$0.05 million. The lease agreement includes an escalation clause for increased rent and a renewal provision allowing the Company to extend this lease for an additional three years at the prevailing rental rate.

In February 2016, the Company entered into a 67-month non-cancellable operating lease effective October 2016 for a new facility in Cambridge, Massachusetts, with laboratory and office space. In conjunction with signing the lease, the Company paid a cash security deposit of \$0.3 million. The lease agreement includes an escalation clause for increased rent and a renewal provision allowing the Company to extend this lease for an additional three years at the prevailing rental rate. The lessor provided the Company a tenant improvement allowance for a total of \$2.1 million to complete the laboratory and office renovation. The Company recorded the tenant allowance received as leasehold improvements under the property and equipment account and deferred rent liability on the accompanying condensed balance sheets.

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In March 2017, the Company entered into a noncancelable operating lease (the Pleasanton Lease) to lease 42,620 square feet of office, cleanroom, and laboratory support manufacturing space in Pleasanton, California (the Pleasanton Facility). Subsequently, in April 2017, the Company took possession of the space. The Pleasanton Lease includes a free rent period, escalating rent payments and a term that expires on November 30, 2024. The Company has the option to extend the lease term for a period of five years at the then market rental rate. The Company's obligation to pay rent commenced on December 1, 2017. The Company obtained an irrevocable letter of credit in March 2017 in the initial amount of \$1.0 million as a security deposit to the Pleasanton Lease, which may be drawn down by the landlord in the event the Company fails to fully and faithfully perform all of its obligations. The letter of credit may be reduced based on certain levels of cash and cash equivalents the Company holds. The Pleasanton Lease further provides that the Company is obligated to pay to the landlord its proportionate share of certain basic operating costs, including taxes and operating expenses.

In connection with the Pleasanton Lease, the Company received a tenant improvement allowance of \$1.2 million from the landlord for the costs associated with the design, development and construction of tenant improvements for the Pleasanton Facility. The scope of the tenant improvements did not qualify under the lease accounting guidance as "normal tenant improvements" and the Company was deemed owner of the leased building during the construction period for accounting purposes. The Company has therefore capitalized the \$9.3 million fair value of the leased building within property and equipment, net, and recognized a corresponding non-current lease financing obligation in the condensed balance sheet as of December 31, 2017 and June 30, 2018. The fair value of the leased building was estimated using a market approach that utilized comparable observable sales for similar assets (Level 2 inputs). The Company has also recognized building improvements totaling \$6.1 million for additions to the leased building incurred by the Company during the construction period, of which \$1.2 million were due but had not yet been received from the landlord as of December 31, 2017 and were recorded as an increase to the lease financing obligation and prepaid and other current assets on the condensed balance sheet. Such amount were subsequently reimbursed by the landlord in April 2018. In November 2017, construction on the Pleasanton Facility was substantially completed and the leased property was placed into service. The Company determined the completed construction project did not qualify for sale-leaseback accounting due to the collateral held by the landlord in the form of a letter of credit and instead has been accounted for as a financing lease transaction. The leased building for the Pleasanton Facility and related improvements remain on the Company's balance sheet as of December 31, 2017 and rental payments associated with the Pleasanton Lease have been allocated to operating lease expense for the ground underlying the leased building and principal and interest payments on the lease financing obligation.

For the six months ended June 30, 2017 and June 30, 2018, the Company recorded rent expense associated with the ground lease of approximately \$26,100 and \$52,200 in the statements of operations and comprehensive loss, respectively. Total interest, which represents the cost of the lease financing obligation under the Pleasanton Lease agreement, was approximately \$0.4 million for the six months ended June 30, 2018, which was recognized within the statement of operations and comprehensive loss. No interest expense was recognized for financing obligation while the leased building was being constructed during the six months ended June 30, 2017. The allocation of the Pleasanton Lease payment to ground lease rent expense and principal and interest expense on the lease financing obligation was estimated using income and market approach that utilized comparable observable sales for similar assets, land capitalization rates and an estimate of the Company's incremental borrowing rate (Level 2 and Level 3 inputs).

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As of June 30, 2018, minimum annual rental payments under the Company's non-cancelable operating lease agreements and lease financing obligation are as follows (in thousands):

	Lease Financing Obligation	Operating Leases
2018 (remaining six months)	\$ 325	\$ 823
2019	794	1,700
2020	818	1,751
2021	843	1,803
2022	868	1,118
Thereafter	1,736	396
Total minimum payments	5,384	<u>\$ 7,591</u>
Less: Amount representing interest expense	(4,754)	
	630	
Residual value of lease financing obligation	9,896	
	10,526	
Less: Lease financing obligation, short-term	(18)	
Lease financing obligation, long-term	<u>\$ 10,508</u>	

Rent expense was \$0.6 million and \$0.6 million for the six month periods ended June 30, 2017 and 2018, respectively.

Agreement with CRO

In September 2017, the Company entered into a contract research and development agreement with a third party contract research organization (CRO) to provide research, analysis and antibody samples to further the Company's development of personalized immunotherapies in the treatment of cancer. Under the agreement, the Company paid an upfront payment of \$0.5 million to the CRO. The upfront payment has been capitalized and will be recognized as research and development expense using the straight-line method over the term of the agreement, which is one year. The Company is also obligated to pay up to \$0.4 million to the CRO upon the completion of certain phases of the research services. These costs will be recorded to research and development expense over the expected period of each phase of the research services. The Company is also obligated to pay the CRO certain milestone payments of up to \$36.4 million on achievement of specified events. None of these events had occurred as of June 30, 2018. During the six months ended June 30, 2018, the Company recognized a total of \$0.6 million of research and development expense under the agreement.

7. License Agreements

Arbutus Biopharma Corporation

In October 2017, the Company entered into an Exclusive License Agreement by and between Arbutus Biopharma Corporation (Arbutus) and Protiva Biotherapeutics Inc. a wholly owned subsidiary of Arbutus. Certain terms of the agreement were modified by amendment in July 2018. Under the license agreement, the Company has an exclusive license to utilize certain Arbutus intellectual property including patents and know-how relating to immunotherapy. Under this license agreement, the

Gritstone Oncology, Inc.
Notes to Unaudited Interim Condensed Financial Statements

Company paid an upfront payment of \$5.0 million which was included in research and development expenses during 2017. The Company also reimbursed Arbutus for materials and personnel costs totaling \$0.2 million, which were included in research and development expenses during 2017. During the six months ended June 30, 2018, the Company reimbursed Arbutus for materials and personnel costs totaling \$0.3 million. The Company is obligated to pay Arbutus certain milestone payments up to \$123.5 million on achievement of specified events, and royalties of not more than 3.5% on sales of its licensed products. None of these events had occurred as of June 30, 2018 and no royalties were due from the sale of licensed products.

Non-Profit Hospital Cancer Center

In January 2016, the Company entered into an Exclusive License Agreement with a non-profit hospital cancer center. Under the license agreement, the Company has an exclusive license to utilize certain patents and know-how relating to immunotherapy for an insignificant upfront payment, cash milestone payments on achievement of specified events, and a low single digit royalty on sales of licensed products. The achievement of the milestones and payment of royalties is dependent upon obtaining regulatory approval. None of the events had occurred as of June 30, 2018 and no royalties were due from the sales of licensed products. The Company also issued a ten-year warrant to the cancer center for the right to purchase 277,778 shares of its common stock at \$0.05 per share. The estimated fair value of the warrant was not significant and was included in research and development expense and additional paid-in-capital. The Warrant was exercised in full in January 2018.

8. Convertible Preferred Stock

Series A Equity Financing

The Company entered into a Series A preferred stock purchase agreement (Series A Preferred Stock Purchase Agreement), with certain investors on September 18, 2015, and upon approval by the Company's Board of Directors, the Company completed a Series A convertible preferred stock financing (Series A—First Tranche) at a price per share of \$1.00. The net cash proceeds from this round of financing totaled \$25.4 million, and 25,525,000 shares of Series A convertible preferred stock were issued. Issuance costs totaled \$0.1 million and were recorded as a reduction of the proceeds.

On April 1, 2016, and upon approval by the Company's Board of Directors, the Company completed a Series A convertible preferred stock financing (Series A—Second Tranche) at a price per share of \$1.00. The net cash proceeds from this round of financing totaled \$35.7 million, and 35,735,000 shares of Series A convertible preferred stock were issued. Issuance costs totaled \$0.02 million and were recorded as a reduction of the proceeds.

Upon approval by the Company's Board of Directors and a majority of the holders of the Series A convertible preferred stock, the Company could proceed with the third closing of the Series A convertible preferred stock for a total of 40,840,000 shares at a purchase price of \$1.00 per share (Series A—Third Tranche). However, for a period of 90 days following such approval, the Company may solicit alternative financing at financially superior terms to those of the Series A—Third Tranche, including a purchase price greater than \$1.00 per share (the Superior Financing Transaction). If approved by the Board of Directors, the Company's obligation to complete the Series A—Third Tranche shall terminate, and the Superior Financing Transaction would proceed. Each Series A convertible preferred stockholder will have the right to purchase at least 50% of its original Series A—Third Tranche amount in the Superior Financing Transaction. The Series A—Second Tranche and Series A—Third Tranche rights are considered to be mutual options as neither the purchasers nor the

Gritstone Oncology, Inc.
Notes to Unaudited Interim Condensed Financial Statements

Company have a commitment or obligation to purchase or sell additional shares. As such, these rights are not accounted for separately. In connection with the Company's Series B Equity Financing the Company's Board of Directors and investors terminated the ability to complete the Series A—Third Tranche.

Series B Equity Financing

The Company entered into a Series B preferred stock purchase agreement (Series B Preferred Stock Purchase Agreement), with certain investors on September 6, 2017 and October 20, 2017, and upon approval by the Company's Board of Directors, the Company completed a Series B convertible preferred stock financing (Series B) at a price per share of \$1.56. The net cash proceeds totaled \$95.8 million and 61,543,319 shares of Series B convertible preferred stock were issued. Issuance costs totaled \$0.2 million and were recorded as a reduction of the proceeds.

Series C Equity Financing

The Company entered into a Series C preferred stock purchase agreement (Series C Preferred Stock Purchase Agreement), with certain investors on June 29, 2018, and upon approval by the Company's Board of Directors, the Company completed a Series C convertible preferred stock financing (Series C) at a price per share of \$1.89. The net cash proceeds totaled \$8.9 million and 4,761,904 shares of Series C convertible preferred stock were issued. Issuance costs totaled \$0.1 million and were recorded as a reduction of the proceeds. In July 2018, the Company sold an additional 1,058,021 shares of Series C convertible preferred stock at a price of \$1.89 per share for net cash proceeds of \$2.0 million.

The preferred stock has various features, including convertibility and non-cumulative dividends. The Company determined that none of the features required bifurcation from the underlying shares, either because they are clearly and closely related to the underlying shares or because they do not meet the definition of a derivative. The Series A, Series B and Series C convertible preferred stock are considered permanent equity and have not been accreted up to their redemption value. The Second and Third Tranche rights are considered to be mutual options as neither the purchasers nor the Company have a commitment or obligation to purchase or sell additional shares. As such, these rights are not accounted for separately. Moreover, in any such redemption (i.e. deemed liquidation) all equity holders (common and preferred) will receive the same form of consideration. The preferred stockholders cannot contractually redeem their shares, or redeem their shares through separate negotiation, without the Company's common stockholders being able to also redeem their shares for the same form of consideration.

Convertible preferred stock consisted of the following (in thousands, except share and per share amounts):

	December 31, 2017				
	Shares Authorized	Shares Issued and Outstanding	Issuance Price Per Share	Carrying Value	Liquidation Preference
Series B	64,102,551	61,543,319	\$ 1.56	\$ 95,798	\$ 96,008
Series A—First Tranche	110,000,000	25,525,000	\$ 1.00	25,425	25,525
Series A—Second Tranche	—	35,735,000	\$ 1.00	35,714	35,735
	<u>174,102,551</u>	<u>122,803,319</u>		<u>\$ 156,937</u>	<u>\$ 157,268</u>

Gritstone Oncology, Inc.
Notes to Unaudited Interim Condensed Financial Statements

	June 30, 2018				
	Shares Authorized	Shares Issued and Outstanding	Issuance Price Per Share	Carrying Value	Liquidation Preference
Series C	16,425,000	4,761,904	\$ 1.89	\$ 8,928	\$ 9,000
Series B	61,543,319	61,543,319	\$ 1.56	95,798	96,008
Series A—First Tranche	61,260,000	25,525,000	\$ 1.00	25,425	25,525
Series A—Second Tranche	—	35,735,000	\$ 1.00	35,714	35,735
	<u>139,228,319</u>	<u>127,565,223</u>		<u>\$ 165,865</u>	<u>\$ 166,268</u>

The rights, preferences, and privileges of the convertible preferred stock are as follows:

Redemption Rights

The preferred stock is not redeemable by holders unless a redemption event occurs. A redemption event will only occur upon the liquidation or winding up of the Company, a greater than 50% change in control, or the sale of substantially all of the assets of the Company. Management has also elected not to adjust the carrying values of the Series A, Series B and Series C convertible preferred stock to the redemption value of such shares, since it is uncertain whether or when a redemption event will occur. Subsequent adjustments to increase the carrying value to the redemption values will be made when it becomes probable that such a redemption will occur.

Dividends Rights

The holders of Series A, Series B and Series C convertible preferred stock are entitled to receive dividends, from any assets legally available, prior and in preference to any declaration or payment of any dividend to the common stockholders, at the rate of 8% of the original issue price (as determined on a per annum basis and on an as-converted basis). Such dividends are payable if and when declared by the Board of Directors and are not cumulative. After payment of such dividends, any additional dividends shall be distributed among the holders of the Series A, Series B and Series C convertible preferred stock and common stock pro rata based on the number of shares of common stock then held by each holder (assuming conversion of all such preferred stock into common stock). As of December 31, 2017 and June 30, 2018, no such dividends had been declared or accrued.

Liquidation Rights

In the event of any liquidation, dissolution, or winding up of the Company, whether voluntary or involuntary (Liquidation Event), the holders of Series C convertible preferred stock are entitled to receive, prior and in preference to any distribution of any of the assets of the Company to the holders of the Series A and B convertible preferred stock, \$1.89 per share (as adjusted for any stock splits, combinations, reorganizations, or similar transactions, plus any declared and unpaid dividends). The holders of Series B convertible preferred stock are entitled to receive, prior and in preference to any distribution of any of the assets of the Company to the holders of the Series A convertible preferred stock, \$1.56 per share (as adjusted for any stock splits, combinations, reorganizations, or similar transactions, plus any declared and unpaid dividends). After payment of the above, the holders of Series A convertible preferred stock are entitled to receive, prior and in preference to any distribution of any of the assets of the Company to the holders of common stock, \$1.00 per share (as adjusted for any stock splits, combinations, reorganizations, or similar transactions, plus any declared and unpaid dividends).

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If, upon the occurrence of such an event, the proceeds to be distributed are insufficient to permit the payment to such holders of the full preferential amounts, then the entire amount legally available for distribution shall be distributed among the holders of the Series A, Series B and Series C preferred stock in proportion to the full preferential amount that each such holder is otherwise entitled to receive had such proceeds been available.

After liquidation preference payments have been made to the holders of the convertible preferred stock as described above, all of the remaining assets and funds of the Company are to be distributed ratably among the holders of the preferred and common stock, as if the preferred stock had been converted to common stock. However, Series C preferred stock holders are limited to the greater of (1) \$9.45 per share (as adjusted for any stock splits, combinations, reorganizations or similar transactions) and (2) the amount the holder would have received if all shares of Series C convertible preferred stock had been converted to common stock prior to such liquidation, dissolution, or winding up of the Company. Series B preferred stockholders are limited to the greater of (1) \$7.80 per share (as adjusted for any stock splits, combinations, reorganizations or similar transactions) and (2) the amount the holder would have received if all shares of Series B convertible preferred stock had been converted to common stock prior to such liquidation, dissolution, or winding up of the Company. Series A preferred stockholders are limited to the greater of (1) \$5.00 per share (as adjusted for any stock splits, combinations, reorganizations or similar transactions) and (2) the amount the holder would have received if all shares of Series A convertible preferred stock had been converted to common stock prior to such liquidation, dissolution, or winding up of the Company.

Voting Rights

Except as otherwise required by law, the holders of common and Series A, Series B and Series C convertible preferred stock vote together as a single class. The holders of the convertible preferred stock are entitled to the number of votes equal to the number of shares of common stock into which the convertible preferred stock could be converted on the record date for the vote, or upon the written consent of the stockholders.

The holders of the Series A convertible preferred stock are entitled to elect three directors of the Company, the holders of the Series B convertible preferred stock are entitled to elect one director of the Company, and the holders of common stock shall be entitled to elect one director of the Company.

Conversion Rights

Each share of Series A, Series B and Series C convertible preferred stock, at the option of the holder and at any time after the date of issuance, is convertible into the number of shares of common stock determined by dividing the respective original issue price by the conversion price (the Conversion Price). At June 30, 2018, the Series A, Series B and Series C Conversion Prices are \$1.00, \$1.56 and \$1.89, respectively, and are subject to certain future adjustments.

Conversion occurs at the conversion rate (i) upon the closing of the sale of common stock at a price of at least \$2.27 per share, in a firm commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, resulting in at least \$50.0 million of net proceeds, or (ii) at the election of (a) the holders of at least a majority of the then outstanding shares of such Series A preferred stock, (b) the holders of at least a majority of the then-outstanding shares of such Series B preferred stock, and (c) the holders of at least a majority of the then outstanding shares of such Series C preferred stock. Through June 30, 2018, the Company has

Gritstone Oncology, Inc.
Notes to Unaudited Interim Condensed Financial Statements

sufficient authorized and unissued common shares available to settle any conversion event. As part of the Company's Series C convertible preferred stock financing, the Company's certificate of incorporation was amended to reduce the initial public offering automatic conversion price for the Series A and B convertible preferred stock from \$3.12 to \$2.27 per share. The Company accounted for this as a modification of an instrument akin to equity that resulted in no incremental fair value being attributed to the Series A and Series B convertible preferred stock.

9. Stock-Based Compensation

2015 Equity Incentive Plan

In February 2018, the Company's board approved a 3,500,000 share increase in the number of shares to be reserved under the Company's 2015 Equity Incentive Plan.

Stock Option Activity

A summary of the stock plan activity is as follows:

	Options Available for Grant	Outstanding Options	Weighted Average Exercise Price
Balances at December 31, 2017	4,320,565	9,328,050	\$ 0.13
Reserved	3,500,000	—	—
Granted	(3,133,930)	3,133,930	0.46
Exercised	—	(268,585)	0.07
Forfeited	685,981	(685,981)	0.19
Repurchased	207,813	—	0.05
Balances at June 30, 2018	<u>5,580,429</u>	<u>11,507,414</u>	0.22

For the six months ended June 30, 2017 and 2018, the total intrinsic value of stock option awards exercised was \$0.07 million and \$0.26 million, respectively, determined at the date of option exercise, and the total cash received upon exercise of stock options was not significant for either period. The total intrinsic value of options exercisable was \$3.2 million as of June 30, 2018. The aggregate intrinsic value was calculated as the difference between the exercise prices of the underlying stock option awards and the estimated fair value of the common stock on the date of exercise.

Valuation of Stock Options

The fair value of each stock option granted to an employee or a director was estimated as of the date of grant using the Black-Scholes model with the following weighted average assumptions:

	Six Months Ended June 30,	
	2017	2018
Dividend yield	—	—
Expected term	6.05 years	6.07 years
Risk-free interest rate	1.94%	2.65%
Expected volatility	94%	89%

Gritstone Oncology, Inc.
Notes to Unaudited Interim Condensed Financial Statements

The grant date fair value of the Company's common stock used in Black-Scholes model has been determined by the Company's Board of Directors with the assistance of management and an independent third-party valuation specialist. The grant date fair value of the Company's common stock was determined using valuation methodologies which utilizes certain assumptions including probability weighting of events, volatility, time to liquidation, a risk-free interest rate and an assumption for a discount for lack of marketability (Level 3 inputs). In determining the fair value of the Company's common stock, the methodologies used to estimate the enterprise value of the Company were performed using methodologies, approaches, and assumptions consistent with the American Institute of Certified Public Accountants Accounting and Valuation Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation ("AICPA Accounting and Valuation Guide").

Additional information related to the status of options at June 30, 2018, is as follows:

	Options	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value (in thousands)
Outstanding	11,507,414	\$ 0.22	8.89	\$ 11,429
Exercisable	2,806,574	0.09	8.44	3,156
Vested and expected to vest	13,127,309	0.19	8.66	13,449

At June 30, 2018, \$3.1 million of total unrecognized compensation cost related to non-vested employee and consultant options is expected to be recognized over a weighted-average period of 2.62. The total fair value of shares vested during the period ended June 30, 2018 was \$0.94 million.

Stock-based compensation expense and awards granted to non-employees was not material for either the six months ended June 30, 2017 or 2018.

Stock-Based Compensation Expense

Total stock-based compensation for all awards granted to employees and consultants, before taxes is as follows (in thousands):

	Six Months Ended June 30,	
	2017	2018
Research and development expenses	\$ 395	\$ 595
General and administrative expenses	111	578
	<u>\$ 506</u>	<u>\$ 1,173</u>

Liability for Early Exercise of Stock Options

As of December 31, 2017 and June 30, 2018, there were 3,721,127 and 2,322,556, respectively, of unvested common shares outstanding that were issued upon the early exercise of stock options prior to the vesting of the underlying shares which were subject to repurchase by the Company at the original issuance price upon termination of the stockholders' services. The right to repurchase these shares generally lapses with respect to 25% of the shares underlying the option after one year of service to the Company and 1/48 of the shares underlying the original grant per month for 36 months thereafter. The shares purchased by the employees pursuant to the early exercise of stock options are

Gritstone Oncology, Inc.
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not deemed, for accounting purposes, to be issued until those shares vest. As of December 31, 2017 and June 30, 2018, the Company recorded \$0.2 million and \$0.1 million, respectively, as short-term and long-term liabilities associated with shares issued subject to repurchase rights.

10. Net Loss and Pro Forma Net Loss Per Share

The following table sets forth the computation of the basic and diluted net loss per share (in thousands, except for per share amounts):

	Six Months Ended June 30,	
	2017	2018
Numerator:		
Net loss	\$ (14,557)	\$ (28,848)
Denominator:		
Weighted average common shares outstanding, basic and diluted	<u>13,156,419</u>	<u>15,772,769</u>
Net loss per share, basic and diluted	<u>\$ (1.11)</u>	<u>\$ (1.83)</u>

Since the Company was in a loss position for all periods presented, basic net loss per share is the same as diluted net loss per share for all periods as the inclusion of all potential common shares outstanding would have been anti-dilutive. Potentially dilutive securities that were not included in the diluted per share calculations because they would be anti-dilutive were as follows:

	June 30,	
	2017	2018
Series A-1 convertible preferred stock	25,525,000	25,525,000
Series A-2 convertible preferred stock	35,735,000	35,735,000
Series B convertible preferred stock	—	61,543,319
Series C convertible preferred stock		4,761,904
Options issued and outstanding	8,236,550	11,507,414
Early exercised common stock subject to future vesting	4,617,643	2,322,503
Warrants to purchase common stock	<u>277,778</u>	<u>—</u>
Total	<u>74,391,971</u>	<u>141,395,140</u>

Pro Forma Net Loss Per Share

The following table sets forth the computation of the Company's pro forma basic and diluted net loss per share (in thousands, except for per share amounts):

	Six Months Ended June 30, 2018
Net loss	<u>\$ (28,848)</u>
Shares used in computing net loss per share, basic and diluted	15,772,769
Pro forma adjustment to reflect assumed conversion of preferred stock	<u>122,855,937</u>
Shares used to compute pro forma net loss per share, basic and diluted	<u>138,628,706</u>
Pro forma net loss per share, basic and diluted	<u>\$ (0.21)</u>

Gritstone Oncology, Inc.
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11. Subsequent Events

Research Collaboration and License Agreement

In August 2018, the Company entered into a Research Collaboration and License Agreement ("License Agreement") with bluebird bio, Inc. ("bluebird"). Under the terms of the License Agreement, bluebird paid the Company a non-refundable upfront fee of \$20.0 million. Bluebird is also obligated to pay the Company additional consideration upon the achievement of specified development, regulatory and commercialization events, and single-digit royalties on sales of products that utilize the technology subject to the License Agreement.

As part of the License Agreement, the Company also sold bluebird 5,300,000 shares of Series C convertible preferred stock at a price of \$1.89 per share for gross proceeds of \$10.0 million.

Stock Option Grants

In August 2018, the Company granted 4,940,000 stock options at a price of \$1.39 per share to executives and other employees of the Company. These options vest over a four year period.

Shares

Gritstone Oncology, Inc.

Common Stock



Goldman Sachs & Co. LLC

Cowen

Barclays

BTIG

PART II**Information Not Required in Prospectus****Item 13. Other Expenses of Issuance and Distribution.**

The following table sets forth the costs and expenses, other than the underwriting discounts and commissions, payable by the registrant in connection with the sale of Common Stock being registered. All amounts are estimates except for the Securities and Exchange Commission, or SEC, registration fee, the FINRA filing fee and The Nasdaq Global Market listing fee.

Item	Amount paid or to be paid
SEC registration fee	\$ 9,960
FINRA filing fee	12,500
The Nasdaq Global Market Listing fee	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Blue Sky, qualification fees and expenses	*
Transfer Agent fees and expenses	*
Miscellaneous expenses	*
Total	\$ <u> </u> *

* To be completed by amendment.

Item 14. Indemnification of Directors and Officers.

As permitted by Section 102 of the Delaware General Corporation Law, we have adopted provisions in our amended and restated certificate of incorporation and bylaws that limit or eliminate the personal liability of our directors for a breach of their fiduciary duty of care as a director. The duty of care generally requires that, when acting on behalf of the corporation, directors exercise an informed business judgment based on all material information reasonably available to them. Consequently, a director will not be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, except for liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- any act related to unlawful stock repurchases, redemptions or other distributions or payment of dividends; or
- any transaction from which the director derived an improper personal benefit.

These limitations of liability do not affect the availability of equitable remedies such as injunctive relief or rescission. Our amended and restated certificate of incorporation also authorizes us to indemnify our officers, directors and other agents to the fullest extent permitted under Delaware law.

As permitted by Section 145 of the Delaware General Corporation Law, our amended and restated bylaws provide that:

- we may indemnify our directors, officers, and employees to the fullest extent permitted by the Delaware General Corporation Law, subject to limited exceptions;

- we may advance expenses to our directors, officers and employees in connection with a legal proceeding to the fullest extent permitted by the Delaware General Corporation Law, subject to limited exceptions; and
- the rights provided in our amended and restated bylaws are not exclusive.

Our amended and restated certificate of incorporation, to be attached as Exhibit 3.2 hereto, and our amended and restated bylaws, to be attached as Exhibit 3.4 hereto, provide for the indemnification provisions described above and elsewhere herein. We have entered into separate indemnification agreements with our directors and officers which may be broader than the specific indemnification provisions contained in the Delaware General Corporation Law. These indemnification agreements generally require us, among other things, to indemnify our officers and directors against liabilities that may arise by reason of their status or service as directors or officers, other than liabilities arising from willful misconduct. These indemnification agreements also generally require us to advance any expenses incurred by the directors or officers as a result of any proceeding against them as to which they could be indemnified. In addition, we have purchased a policy of directors' and officers' liability insurance that insures our directors and officers against the cost of defense, settlement or payment of a judgment in some circumstances. These indemnification provisions and the indemnification agreements may be sufficiently broad to permit indemnification of our officers and directors for liabilities, including reimbursement of expenses incurred, arising under the Securities Act of 1933, as amended, or the Securities Act.

The form of Underwriting Agreement, to be attached as Exhibit 1.1 hereto, provides for indemnification by the underwriters of us and our officers who sign this Registration Statement and directors for specified liabilities, including matters arising under the Securities Act.

Item 15. Recent Sales of Unregistered Securities.

The following list sets forth information as to all securities we have sold since our inception on August 5, 2015, which were not registered under the Securities Act.

1. In September 2015, we issued an aggregate of 25,525,000 shares of our Series A convertible preferred stock to 36 accredited investors at a price per share of \$1.00 for aggregate proceeds to us of approximately \$25.5 million.
2. In January 2016, we issued a warrant to purchase 277,776 shares of our common stock at an exercise price of \$0.05 per share, as partial consideration for licenses under a license agreement. In January 2018, the warrant was exercised in full for proceeds to us of approximately \$14,000.
3. In April 2016, we issued an aggregate of 35,735,000 shares of our Series A convertible preferred stock to 36 accredited investors at a price per share of \$1.00 for aggregate proceeds to us of approximately \$35.7 million.
4. In September and October 2017, we issued an aggregate of 61,543,319 shares of our Series B convertible preferred stock to 45 accredited investors at a price per share of \$1.56 for aggregate proceeds to us of approximately \$96.0 million.
5. In June, July and August 2018, we issued an aggregate of 11,120,105 shares of our Series C convertible preferred stock to 11 accredited investors at a price per share of \$1.89 for aggregate proceeds to us of approximately \$21.0 million.
6. We granted stock options and stock awards to employees, directors and consultants covering an aggregate of 24,976,697 shares of common stock, at a weighted-average exercise price of approximately \$0.40 per share. Of these, options covering an aggregate of 965,981 shares were cancelled without being exercised and 287,813 unvested shares were repurchased concurrent with employee terminations.

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7. We sold an aggregate of 18,994,157 shares of common stock to employees, directors and consultants for cash consideration in the aggregate amount of approximately \$0.4 million pursuant to stock options and stock awards.

We claimed exemption from registration under the Securities Act for the sale and issuance of securities in the transactions described in paragraphs (1) through (5) by virtue of Section 4(a)(2) and/or Regulation D promulgated thereunder as transactions not involving any public offering. All of the purchasers of unregistered securities for which we relied on Section 4(a)(2) and/or Regulation D represented that they were accredited investors as defined under the Securities Act. We claimed such exemption on the basis that (a) the purchasers in each case represented that they intended to acquire the securities for investment only and not with a view to the distribution thereof and that they either received adequate information about the registrant or had access, through employment or other relationships, to such information and (b) appropriate legends were affixed to the stock certificates issued in such transactions.

We claimed exemption from registration under the Securities Act for the sales and issuances of securities in the transactions described in paragraphs (6) and (7) above under Section 4(a)(2) of the Securities Act in that such sales and issuances did not involve a public offering or under Rule 701 promulgated under the Securities Act, in that they were offered and sold either pursuant to written compensatory plans or pursuant to a written contract relating to compensation, as provided by Rule 701.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith
		Form	Date	Number	
1.1*	Form of Underwriting Agreement.				
3.1	Amended and Restated Certificate of Incorporation, as amended, currently in effect.				X
3.2*	Form of Amended and Restated Certificate of Incorporation, to be in effect immediately prior to the consummation of this offering.				
3.3	Bylaws, currently in effect.				X
3.4*	Form of Amended and Restated Bylaws, to be in effect immediately prior to the consummation of this offering.				
4.1	Reference is made to Exhibits 3.1 through 3.4.				
4.2*	Form of Common Stock Certificate.				
5.1*	Opinion of Latham & Watkins LLP.				
10.1(a)†	License Agreement, dated as of October 16, 2017, by and among Gritstone Oncology, Inc., Arbutus Biopharma Corporation and its subsidiary Protiva Biotherapeutics Inc.				X
10.1(b)†	Amendment Number One to License Agreement, dated as of July 20, 2018, by and among Gritstone Oncology, Inc., Arbutus Biopharma Corporation and its subsidiary Protiva Biotherapeutics Inc.				X

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Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith
		Form	Date	Number	
10.2	Amended and Restated Investors' Rights Agreement dated as of June 29, 2018, by and among Gritstone Oncology, Inc. and the investors listed therein.				X
10.3	Lease, dated as of November 11, 2015, by and between Gritstone Oncology, Inc. and Emery Station Joint Venture, LLC.				X
10.4	Lease, dated as of February 11, 2016, by and between Gritstone Oncology, Inc. and BMR-Sidney Research Campus LLC.				X
10.5†	Office Building Net Lease, dated as of March 24, 2017, by and between Gritstone Oncology, Inc. and Hacienda Portfolio Venture, LLC.				X
10.6(a)#	2015 Equity Incentive Plan, as amended.				X
10.6(b)#	Form of Stock Option Agreement under 2015 Equity Incentive Plan.				X
10.6(c)#	Form of Early Exercise Stock Option Agreement under 2015 Equity Incentive Plan.				X
10.6(d)#	Form of Stock Purchase Right Grant Notice and Restricted Stock Purchase Agreement under 2015 Equity Incentive Plan.				X
10.7(a)**	2018 Incentive Award Plan.				
10.7(b)**	Form of Stock Option Grant Notice and Stock Option Agreement under the 2018 Incentive Award Plan.				
10.7(c)**	Form of Restricted Stock Award Agreement under the 2018 Incentive Award Plan.				
10.7(d)**	Form of Restricted Stock Unit Award Grant Notice under the 2018 Incentive Award Plan.				
10.8#*	2018 Employee Stock Purchase Plan.				
10.9#*	Employment Agreement by and between Gritstone Oncology, Inc. and Andrew Allen, M.D., Ph.D.				
10.10#*	Employment Agreement by and between Gritstone Oncology, Inc. and Matthew Hawryluk, Ph.D.				
10.11#*	Employment Agreement by and between Gritstone Oncology, Inc. and Karin Jooss, Ph.D.				
10.12#*	Employment Agreement by and between Gritstone Oncology, Inc. and Raphaël Rousseau, M.D., Ph.D.				
10.13#*	Employment Agreement by and between Gritstone Oncology, Inc. and Roman Yelensky, Ph.D.				
10.14#*	Employment Agreement by and between Gritstone Oncology, Inc. and Jean-Marc Bellemin.				
10.15#*	Employment Agreement by and between Gritstone Oncology, Inc. and Jayant Aphale, Ph.D.				

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Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith
		Form	Date	Number	
10.16##*	Employment Agreement by and between Gritstone Oncology, Inc. and Erin Jones.				
10.17##*	Non-Employee Director Compensation Program.				
10.18*	Form of Indemnification Agreement for directors and officers.				
23.1	Consent of Independent Registered Public Accounting Firm.				X
23.2*	Consent of Latham & Watkins LLP (included in Exhibit 5.1).				
24.1	Power of Attorney. Reference is made to the signature page to the Registration Statement.				X

* To be filed by amendment.

† Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment and this exhibit has been filed separately with the SEC.

Indicates management contract or compensatory plan.

(b) Financial Statement Schedules. Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes thereto.

Item 17. Undertakings.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer, or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

1. For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective.
2. For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

The undersigned Registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Signatures

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in Emeryville, California on August 23, 2018.

Gritstone Oncology, Inc.

By: /s/ Andrew Allen
Andrew Allen, M.D., Ph.D.
President and Chief Executive Officer

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Andrew Allen, M.D., Ph.D. and Jean-Marc Bellemin, and each of them acting individually, as his or her true and lawful attorneys-in-fact and agents, each with full power of substitution, for him or her in any and all capacities, to sign any and all amendments to this Registration Statement, including post-effective amendments or any abbreviated registration statement and any amendments thereto filed pursuant to Rule 462(b) increasing the number of securities for which registration is sought, and to file the same, with all exhibits thereto and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents, with full power of each to act alone, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or his or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Andrew Allen</u> Andrew Allen, M.D., Ph.D.	President, Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	August 23, 2018
<u>/s/ Jean-Marc Bellemin</u> Jean-Marc Bellemin	Chief Financial Officer <i>(Principal Financial and Accounting Officer)</i>	August 23, 2018
<u>/s/ Richard Heyman</u> Richard Heyman, Ph.D.	Director	August 23, 2018
<u>/s/ Steve Krognnes</u> Steve Krognnes	Director	August 23, 2018
<u>/s/ Judith Li</u> Judith Li	Director	August 23, 2018
<u>/s/ Nicholas Simon</u> Nicholas Simon	Director	August 23, 2018
<u>/s/ Peter Svennilson</u> Peter Svennilson	Director	August 23, 2018
<u>/s/ Thomas Woiwode</u> Thomas Woiwode, Ph.D.	Director	August 23, 2018

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
GRITSTONE ONCOLOGY, INC.

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

Gritstone Oncology, Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "**General Corporation Law**"),

DOES HEREBY CERTIFY:

1. That the name of this corporation is Gritstone Oncology, Inc., and that this corporation was originally incorporated pursuant to the General Corporation Law on August 5, 2015.

2. That the Board of Directors of this corporation duly adopted resolutions proposing to amend and restate the Certificate of Incorporation of this corporation, declaring said amendment and restatement to be advisable and in the best interests of this corporation and its stockholders, and authorizing the appropriate officers of this corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed amendment and restatement is as follows:

RESOLVED, that the Certificate of Incorporation of this corporation be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Gritstone Oncology, Inc. (the "**Corporation**").

SECOND: The address of the registered office of the Corporation in the State of Delaware is 251 Little Falls Drive, Wilmington, Delaware 19808, County of New Castle. The name of its registered agent at such address is Corporation Service Company.

THIRD: The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 175,250,000 shares of Common Stock, \$0.0001 par value per share ("**Common Stock**") and (ii) 139,228,319 shares of Preferred Stock, \$0.0001 par value per share ("**Preferred Stock**").

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of the Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings); provided, however, that, except as otherwise required by law, holders of Common Stock, as such, shall not be entitled to vote on any amendment to the Certificate of Incorporation that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together with the holders of one or more other such series, to vote thereon pursuant to the Certificate of Incorporation or pursuant to the General Corporation Law. There shall be no cumulative voting. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of the Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Corporation representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

B. PREFERRED STOCK

The Preferred Stock authorized by the Certificate of Incorporation shall be divided into series as provided herein. 61,260,000 shares of the authorized Preferred Stock of the Corporation are designated Series A Preferred Stock, par value \$0.0001 per share (the “**Series A Preferred Stock**”), 61,543,319 shares of the authorized Preferred Stock of the Corporation are designated Series B Preferred Stock, par value \$0.0001 per share (the “**Series B Preferred Stock**”), and 16,425,000 shares of the authorized Preferred Stock of the Corporation are designated Series C Preferred Stock, par value \$0.0001 per share (the “**Series C Preferred Stock**”), with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations. Unless otherwise indicated, references to “sections” in this Part B of this Article Fourth refer to sections of Part B of this Article Fourth.

1. Dividends.

The holders of shares of Preferred Stock shall be entitled to receive dividends, out of any assets legally available therefor, prior and in preference to any declaration or payment of any dividend (payable other than in Common Stock or other securities and rights convertible into or entitling the holder thereof to receive, directly or indirectly, additional shares of Common Stock of the Corporation) on the Common Stock, at the rate of 8% of the Original Issue Price (as defined below) for the applicable series of Preferred Stock per annum on each share of Preferred Stock then outstanding, payable when, as and if declared by the Board of Directors of the Corporation (the “**Board of Directors**”). Such dividends shall not be cumulative. After payment of such dividends, any additional dividends shall be distributed among the holders of Preferred Stock and Common Stock pro rata based on the number of shares of Common Stock then held by each holder (assuming conversion of all such Preferred Stock into Common Stock).

2. Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.

2.1 Preferential Payments to Holders of Preferred Stock.

2.1.1 In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event (as defined below), the holders of shares of Series C Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Series B Preferred Stock, Series A Preferred Stock or Common Stock by reason of their ownership thereof, an amount per share equal to the Series C Original Issue Price (as defined below), plus any dividends declared but unpaid thereon (such amount, the “**Series C Liquidation Preference Amount**”). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series C Preferred Stock the full amount to which they shall be entitled under this Section 2.1.1, the holders of shares of Series C Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full. As of the filing date of this Amended and Restated Certificate of Incorporation (the “**Filing Date**”), the “**Series A Original Issue Price**” means \$1.00 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock. As of the Filing Date, the “**Series B Original Issue Price**” means \$1.56 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock. As of the Filing Date, the “**Series C Original Issue Price**” means \$1.89 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock. “**Original Issue Price**” means the Series A Original Price, Series B Original Issue Price and Series C Original Issue Price, individually or collectively, as applicable.

2.1.2 In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event (as defined below), after the payment of all preferential amounts required to be paid to the holders of shares of Series C Preferred Stock pursuant to Section 2.1.1, the holders of shares of Series B Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Series A Preferred Stock or Common Stock by reason of their ownership thereof, an amount per share equal to the Series B Original Issue Price, plus any dividends declared but unpaid thereon (such amount, the “**Series B Liquidation Preference Amount**”). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series B Preferred Stock the full amount to which they shall be entitled under this Section 2.1.2, the holders of shares of Series B Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.1.3 In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, after the payment of all preferential amounts required to be paid to the holders of shares of Series C Preferred Stock pursuant to Section 2.1.1 and Series B Preferred Stock pursuant Section 2.1.2, the holders of shares of Series A Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Common Stock by reason of their ownership thereof, an amount per share equal to the Series A Original Issue Price, plus any dividends declared but unpaid thereon. If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders (after payment in full of the preferential payments to the holders of Series C Preferred Stock pursuant to Section 2.1.1 hereof and the holders of Series B Preferred Stock pursuant to Section 2.1.2 hereof) shall be insufficient to pay the holders of shares of Series A Preferred Stock the full amount to which they shall be entitled under this Section 2.1.3, the holders of shares of Series A Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.2 Distribution of Remaining Assets. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, after the payment of all preferential amounts required to be paid to the holders of shares of Preferred Stock pursuant to Section 2.1, the remaining assets of the Corporation available for distribution to its stockholders shall be distributed among the holders of the shares of Preferred Stock and Common Stock, pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to Common Stock pursuant to the terms of the Amended and Restated Certificate of Incorporation immediately prior to such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event; provided, however, that if the aggregate amount which the holders of Series A Preferred Stock are entitled to receive under Sections 2.1 and 2.2 shall exceed five (5) times the Series A Original Issue Price per share of Series A Preferred Stock (the “**Series A Maximum Participation Amount**”), then, in lieu of the amounts otherwise payable under Sections 2.1 and 2.2, each holder of Series A Preferred Stock shall instead be entitled to receive upon such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the greater of (i) the Series A Maximum Participation Amount and (ii) the amount such holder would have received if all shares of Series A Preferred Stock had been converted into Common Stock immediately prior to such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event; provided further, that if the aggregate amount which any individual holder of Series B Preferred Stock is entitled to receive under Sections 2.1 and 2.2 shall exceed five (5) times the Series B Original Issue Price per share of Series B Preferred Stock paid by such holder (the “**Series B Maximum Participation Amount**”), then, in lieu of the amounts otherwise payable under Sections 2.1 and 2.2, each holder of Series B Preferred Stock shall instead be entitled to receive upon such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the greater of (i) the Series B Maximum Participation Amount and (ii) the amount such holder would have received if all shares of Series B Preferred Stock had been converted into Common Stock immediately prior to such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event; and provided further, that if the aggregate amount which any individual holder of Series C Preferred Stock is entitled to receive under Sections 2.1 and 2.2 shall exceed five (5) times the Series C Original Issue Price per share of Series C Preferred Stock paid by such holder

(the “**Series C Maximum Participation Amount**”), then, in lieu of the amounts otherwise payable under Sections 2.1 and 2.2, each holder of Series C Preferred Stock shall instead be entitled to receive upon such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the greater of (i) the Series C Maximum Participation Amount and (ii) the amount such holder would have received if all shares of Series C Preferred Stock had been converted into Common Stock immediately prior to such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event. The aggregate amount which a holder of a share of Preferred Stock is entitled to receive under Sections 2.1 and 2.2 is hereinafter referred to as the “**Liquidation Amount**.”

2.3 Deemed Liquidation Events.

2.3.1 Definition. Each of the following events shall be considered a “**Deemed Liquidation Event**” unless the Requisite Series C Holders (as defined below) and the holders of at least a majority of the outstanding shares of Preferred Stock elect otherwise by written notice sent to the Corporation at least 10 days prior to the effective date of any such event:

- (a) a merger or consolidation in which
 - (i) the Corporation is a constituent party or
 - (ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation,

except any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, at least a majority, by voting power, of the capital stock of (1) the surviving or resulting corporation; or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation; or

(b) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets of the Corporation and its subsidiaries taken as a whole, or the sale or disposition (whether by merger, consolidation or otherwise) of one or more subsidiaries of the Corporation if substantially all of the assets of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation.

2.3.2 Effecting a Deemed Liquidation Event.

(a) The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in Section 2.3.1(a)(i) unless the agreement or plan of merger or consolidation for such transaction (the “**Merger Agreement**”) provides that the consideration payable to the stockholders of the Corporation shall be allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1 and 2.2.

(b) In the event of a Deemed Liquidation Event referred to in Sections 2.3.1(a)(ii) or 2.3.1(b), if the Corporation does not effect a dissolution of the Corporation under the General Corporation Law within ninety (90) days after such Deemed Liquidation Event, then (i) the Corporation shall send a written notice (the “**Redemption Notice**”) to each holder of Preferred Stock no later than the ninetieth (90th) day after the Deemed Liquidation Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clause to require the redemption of such shares of Preferred Stock, and (ii) if the holders of at least a majority of the then-outstanding shares of Preferred Stock so request in a written instrument delivered to the Corporation not later than one hundred twenty (120) days after such Deemed Liquidation Event, the Corporation shall use the consideration received by the Corporation for such Deemed Liquidation Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board of Directors), together with any other assets of the Corporation available for distribution to its stockholders, all to the extent permitted by Delaware law governing distributions to stockholders (the “**Available Proceeds**”), on the one hundred fiftieth (150th) day after such Deemed Liquidation Event, to redeem all outstanding shares of Preferred Stock at a price per share equal to the applicable Liquidation Amount for each series of Preferred Stock. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Available Proceeds are not sufficient to redeem all outstanding shares of Preferred Stock, the Corporation shall (1) first, redeem, at a per share price equal to the Liquidation Amount for the Series C Preferred Stock, such number of each holder’s outstanding shares of Series C Preferred Stock as required to pay each such holder an amount equal to the product of (x) the Series C Liquidation Preference Amount and (y) the total number of outstanding shares of Series C Preferred Stock held by such holder (or, if the Available Proceeds are not sufficient to redeem all such shares, a pro rata portion of each holder’s shares of Series C Preferred Stock to the extent of such Available Proceeds, based on the respective amounts which would otherwise be payable under this clause (1) in respect of such shares if such amount were sufficient to redeem all such shares), (2) second, after the redemption of all outstanding shares of Series C Preferred Stock described in clause (1) above, redeem, at a per share price equal to the Liquidation Amount for the Series B Preferred Stock, such number of each holder’s outstanding shares of Series B Preferred Stock as required to pay each such holder an amount equal to the product of (x) the Series B Liquidation Preference Amount and (y) the total number of outstanding shares of Series B Preferred Stock held by such holder (or, if the Available Proceeds are not sufficient to redeem all such shares, a pro rata portion of each holder’s shares of Series B Preferred Stock to the extent of such Available Proceeds, based on the respective amounts which would otherwise be payable under this clause (2) in respect of such shares if such amount were sufficient to redeem all such shares), (3) after the redemption of all outstanding shares of Series B Preferred Stock described in clause (2) above, redeem, at a per share price equal to the Liquidation Amount for the Series A Preferred Stock, such number of each holder’s outstanding shares of Series A Preferred Stock as required to pay each such holder an amount equal to the product of (x) the Series A Liquidation Preference Amount and (y) the total number of outstanding shares of Series A Preferred Stock held by such holder (or, if the Available Proceeds are not sufficient to redeem all such shares, a pro rata portion of each holder’s shares of Series A Preferred Stock to the extent of such Available Proceeds, based on the respective amounts which would otherwise be payable under this clause (3) in respect of such shares if such amount were sufficient to redeem all such shares), and (4) after the redemption of all outstanding shares of Preferred Stock

described in clauses (1), (2) and (3) above, redeem, at a per share price equal to the applicable Liquidation Amount for each series of Preferred Stock, all remaining outstanding shares of Preferred Stock (or, if the Available Proceeds are not sufficient to redeem all such shares, a pro rata portion of each holder's shares of Preferred Stock to the extent of such Available Proceeds, based on the respective amounts which would otherwise be payable under this clause (4) in respect of such shares if such amount were sufficient to redeem all such shares); in each case under clauses (1) through (4) above, redeeming the remaining shares to be redeemed under such clause, in the same manner and with the same priority, as soon as it may lawfully do so under Delaware law governing distributions to stockholders.

(i) Each Redemption Notice shall state: (1) the number of shares of Preferred Stock held by the holder that the Corporation shall redeem; (2) the date of redemption (the "**Redemption Date**") and the amount to be paid to such holder; and (3) for holders of shares in certificated form, that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Preferred Stock to be redeemed.

(ii) On or before the Redemption Date, each holder of shares of Preferred Stock to be redeemed shall surrender the certificate or certificates representing such shares (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated in the Redemption Notice, and thereupon the Available Proceeds for such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof.

Prior to the distribution or redemption provided for in this Section 2.3.2(b), the Corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with such Deemed Liquidation Event or in the ordinary course of business.

2.3.3 Amount Deemed Paid or Distributed. The amount deemed paid or distributed to the holders of capital stock of the Corporation upon any such merger, consolidation, sale, transfer, exclusive license, other disposition or redemption shall be the cash or the value of the property, rights or securities paid or distributed to such holders by the Corporation or the acquiring person, firm or other entity. The value of such property, rights or securities shall be determined in good faith by the Board of Directors.

2.3.4 Allocation of Escrow and Contingent Consideration. In the event of a Deemed Liquidation Event, if any portion of the consideration payable or distributable to the stockholders of the Corporation is payable or distributable only upon satisfaction of contingencies (the "**Additional Consideration**"), the Merger Agreement (if any) shall provide that, and the Corporation shall otherwise ensure that, (a) the portion of such consideration that is not Additional Consideration (such portion, the "**Initial Consideration**") shall be allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1 and 2.2 as if the Initial Consideration were the only consideration payable or distributable in connection with such Deemed Liquidation Event; and (b) any Additional Consideration which becomes payable or distributable to the stockholders of the Corporation upon satisfaction of such contingencies shall

be allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1 and 2.2 after taking into account the previous payment or distribution of the Initial Consideration as part of the same transaction. For the purposes of this Section 2.3.4, consideration placed into escrow or retained as holdback to be available for satisfaction of indemnification or similar obligations in connection with such Deemed Liquidation Event shall be deemed to be Additional Consideration.

3. Voting.

3.1 General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of this Amended and Restated Certificate of Incorporation, holders of Preferred Stock shall vote together with the holders of Common Stock as a single class.

3.2 Election of Directors. The holders of record of the shares of Series A Preferred Stock, exclusively and as a separate class, shall be entitled to elect three (3) directors of the Corporation (the “**Series A Directors**”), the holders of record of the shares of Series B Preferred Stock, exclusively and as a separate class, shall be entitled to elect one (1) director of the Corporation (the “**Series B Director**”), and the holders of record of the shares of Common Stock, exclusively and as a separate class, shall be entitled to elect one (1) director of the Corporation. Any director elected as provided in the preceding sentence may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. If the holders of shares of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Common Stock, as the case may be, fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors, voting exclusively and as a separate class, pursuant to the first sentence of this Section 3.2, then any directorship not so filled shall remain vacant until such time as the holders of the Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Common Stock, as the case may be, elect a person to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship, voting exclusively and as a separate class. The holders of record of the shares of Common Stock and of any other class or series of voting stock (including the Preferred Stock), exclusively and voting together as a single class, shall be entitled to elect the balance of the total number of directors of the Corporation. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. Except as otherwise provided in this Section 3.2, a vacancy in any directorship filled by the holders of any class or series shall be filled only by vote or written consent in lieu of a meeting of the holders of such class or series or by any remaining director or directors elected by the holders of such class or series pursuant to this Section 3.2. The rights of the holders of the Series A Preferred Stock under the first sentence of this Section 3.2 shall terminate on the first date following the Series C Original Issue Date (as defined below) on

which there are issued and outstanding fewer than 10,000,000 shares of Series A Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination, or other similar recapitalization with respect to the Series A Preferred Stock), and the rights of the holders of the holders of the Series B Preferred Stock under the first sentence of this Section 3.2 shall terminate on the first date following the Series C Original Issue Date on which there are issued and outstanding fewer than 9,500,000 shares of Series B Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination, or other similar recapitalization with respect to the Series B Preferred Stock).

3.3 Preferred Stock Protective Provisions. At any time when at least 20,000,000 shares of Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to any series of Preferred Stock) are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Amended and Restated Certificate of Incorporation) the written consent or affirmative vote of the holders of at least a majority of the then-outstanding shares of Preferred Stock (on an as converted to Common Stock basis), given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.3.1 liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any merger or consolidation or any other Deemed Liquidation Event, or consent to any of the foregoing;

3.3.2 increase or decrease the authorized number of shares of Common Stock or Preferred Stock, or any series thereof (other than decreases resulting from conversion of shares of Preferred Stock);

3.3.3 increase or decrease the authorized number of directors constituting the Board of Directors;

3.3.4 amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation or take any action with respect to the Certificate of Incorporation or Bylaws of the Corporation that adversely affects the powers, preferences or rights of the Preferred Stock or any series thereof;

3.3.5 create, or authorize the creation of, any additional class or series of capital stock unless the same ranks junior to the Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption, or increase the authorized number of shares of Series A Preferred Stock, Series B Preferred Stock or Series C Preferred Stock or increase the authorized number of shares of any additional class or series of capital stock unless the same ranks junior to the Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption;

3.3.6 (i) reclassify, alter or amend any existing security of the Corporation that is *pari passu* with the Series A Preferred Stock, Series B Preferred Stock or Series C Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to such series of Preferred Stock in respect of any such right, preference, or privilege or (ii) reclassify, alter or amend any existing security of the Corporation that is junior to the Series A Preferred Stock, Series B Preferred Stock or Series C Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or *pari passu* with such series of Preferred Stock in respect of any such right, preference or privilege;

3.3.7 purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Series A Preferred Stock, Series B Preferred Stock or Series C Preferred Stock as expressly authorized herein, (ii) dividends or other distributions payable on the Common Stock solely in the form of additional shares of Common Stock and (iii) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at the lower of the original purchase price or the then-current fair market value thereof;

3.3.8 (i) create, or authorize the creation of, or issue, or authorize the issuance of any debt security or otherwise incur indebtedness, or permit any subsidiary to take any such action with respect to any debt security or other indebtedness, if the aggregate indebtedness of the Corporation and its subsidiaries for borrowed money following such actions would exceed \$1,000,000 or (ii) enter into any agreement to make any loan or guarantee in excess of \$1,000,000;

3.3.9 create, or hold capital stock in, any subsidiary that is not wholly owned (either directly or through one or more other subsidiaries) by the Corporation, or sell, transfer or otherwise dispose of any capital stock of any direct or indirect subsidiary of the Corporation, or permit any direct or indirect subsidiary to sell, lease, transfer, exclusively license or otherwise dispose (in a single transaction or series of related transactions) of all or substantially all of the assets of such subsidiary; or

3.3.10 permit any subsidiary to take any of the forgoing actions.

3.4 Series C Preferred Stock Protective Provisions. At any time when at least 2,500,000 shares of Series C Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock) are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Amended and Restated Certificate of Incorporation) the written consent or affirmative vote of the holders of at least 66 2/3% of the then-outstanding shares of Series C Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class (the "**Requisite Series C Holders**"), and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.4.1 liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any merger or consolidation or any other Deemed Liquidation Event, or consent to any of the foregoing, unless the holders of the Series C Preferred Stock shall receive as consideration payable on such Series C Preferred Stock in such liquidation, dissolution, wind-up, merger, consolidation or other Deemed Liquidation Event an amount per share (inclusive of both Initial Consideration and Additional Consideration payable with respect thereto) equal to or greater than the Series C Liquidation Preference Amount;

3.4.2 amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation or take any action with respect to the Certificate of Incorporation or Bylaws of the Corporation that adversely affects the powers, preferences or rights of the Series C Preferred Stock;

3.4.3 increase or decrease the authorized number of shares of Series C Preferred Stock (other than decreases resulting from conversion of shares of Series C Preferred Stock);

3.4.4 (i) reclassify, alter or amend any existing security of the Corporation that is *pari passu* with the Series C Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to such series of Preferred Stock in respect of any such right, preference, or privilege or (ii) reclassify, alter or amend any existing security of the Corporation that is junior to the Series C Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or *pari passu* with of the Series C Preferred Stock in respect of any such right, preference or privilege; or

3.4.5 purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Series A Preferred Stock, Series B Preferred Stock or Series C Preferred Stock as expressly authorized herein, (ii) dividends or other distributions payable on the Common Stock solely in the form of additional shares of Common Stock and (iii) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at the lower of the original purchase price or the then-current fair market value thereof.

3.5 Series B Preferred Stock Protective Provisions. At any time when at least 9,500,000 shares of Series B Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock) are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Amended and Restated Certificate of Incorporation) the written consent or affirmative vote of the holders of at least a majority of the then-outstanding shares of Series B Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class (the "**Requisite Series B Holders**"), and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.5.1 liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any merger or consolidation or any other Deemed Liquidation Event, or consent to any of the foregoing, unless the holders of the Series B Preferred Stock shall receive as consideration payable on such Series B Preferred Stock in such liquidation, dissolution, wind-up, merger, consolidation or other Deemed Liquidation Event an amount per share (inclusive of both Initial Consideration and Additional Consideration payable with respect thereto) equal to or greater than the Series B Liquidation Preference Amount;

3.5.2 amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation or take any action with respect to the Certificate of Incorporation or Bylaws of the Corporation that adversely affects the powers, preferences or rights of the Series B Preferred Stock;

3.5.3 (i) reclassify, alter or amend any existing security of the Corporation that is *pari passu* with the Series B Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to such series of Preferred Stock in respect of any such right, preference, or privilege or (ii) reclassify, alter or amend any existing security of the Corporation that is junior to the Series B Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or *pari passu* with of the Series B Preferred Stock in respect of any such right, preference or privilege; or

3.5.4 purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Series A Preferred Stock, Series B Preferred Stock or Series C Preferred Stock as expressly authorized herein, (ii) dividends or other distributions payable on the Common Stock solely in the form of additional shares of Common Stock and (iii) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at the lower of the original purchase price or the then-current fair market value thereof;

provided, however, that the consent or vote (as the case may be) of the Requisite Series B Holders shall not be required pursuant to this Section 3.5 for any act or transaction approved by the Board, which includes the affirmative consent or vote of the then-serving Series B Director.

4. Optional Conversion. The holders of the Preferred Stock shall have conversion rights as follows (the “**Conversion Rights**”):

4.1 Right to Convert.

4.1.1 Conversion Ratio. Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of Common Stock as is determined by dividing the Original Issue Price for the applicable series of Preferred Stock by the Conversion Price (as defined below) in effect for such series of Preferred Stock at the time of conversion. As of the Filing Date, the Conversion Price for

the Series A Preferred Stock is \$1.00 (the “**Series A Conversion Price**”), the Conversion Price for the Series B Preferred Stock is \$1.56 (the “**Series B Conversion Price**”) and the Conversion Price for the Series C Preferred Stock is \$1.89 (the “**Series C Conversion Price**”). The term “**Conversion Price**” means the Series A Conversion Price, the Series B Conversion Price and Series C Conversion Price, individually or collectively, as applicable. The initial Conversion Price for the Series A Preferred Stock, the Series B Preferred Stock and the Series C Preferred Stock, and the rate at which shares of such series of Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2 Termination of Conversion Rights. In the event of a liquidation, dissolution or winding up of the Corporation or a Deemed Liquidation Event, the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Preferred Stock.

4.2 Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors. Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3 Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of Preferred Stock to voluntarily convert shares of Preferred Stock into shares of Common Stock, such holder shall (a) provide written notice to the Corporation’s transfer agent at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent) that such holder elects to convert all or any number of such holder’s shares of Preferred Stock and, if applicable, any event on which such conversion is contingent and (b), if such holder’s shares are certificated, surrender the certificate or certificates for such shares of Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent). Such notice shall state such holder’s name or the names of the nominees in which such holder wishes the shares of Common Stock to be issued. If required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such notice and, if applicable, certificates (or lost certificate affidavit and agreement) shall be the time of conversion (the “**Conversion Time**”), and the shares of Common Stock issuable upon conversion of the specified shares shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time (i) issue and deliver to such holder of Preferred Stock, or to his, her or its nominees, a certificate or

certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, (ii) pay in cash such amount as provided in Section 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and (iii) pay all declared but unpaid dividends on the shares of Preferred Stock converted.

4.3.2 Reservation of Shares. The Corporation shall, at all times when shares of Preferred Stock are outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to the Certificate of Incorporation. Before taking any action which would cause an adjustment reducing the Conversion Price for any series of Preferred Stock below the then par value of the shares of Common Stock issuable upon conversion of such series of Preferred Stock, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and non-assessable shares of Common Stock at such adjusted Conversion Price.

4.3.3 Effect of Conversion. All shares of Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of Common Stock in exchange therefor, to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Section 4.2 and to receive payment of any dividends declared but unpaid thereon. Any shares of Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion of shares of Preferred Stock, no adjustment to the Conversion Price for the applicable series of Preferred Stock shall be made for any declared but unpaid dividends on such series of Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 Adjustments to Conversion Price for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

- Securities.
- (a) “**Option**” means rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.
 - (b) “**Series C Original Issue Date**” means the date on which the first share of Series C Preferred Stock was issued.
 - (c) “**Convertible Securities**” means any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.
 - (d) “**Additional Shares of Common Stock**” means all shares of Common Stock issued (or, pursuant to Section 4.4.3 below, deemed to be issued) by the Corporation after the Series C Original Issue Date, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, “**Exempted Securities**”):
 - (i) shares of Common Stock, Options or Convertible Securities issued as a dividend or distribution on any series of Preferred Stock;
 - (ii) shares of Common Stock, Options or Convertible Securities issued by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock for which an adjustment to the Series A Conversion Price, Series B Conversion Price or Series C Conversion Price, as the case may be, is made pursuant to Section 4.5, 4.6, 4.7 or 4.8;
 - (iii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors;
 - (iv) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided such issuance is pursuant to the terms of such Option or Convertible Security;
 - (v) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors;
 - (vi) shares of Common Stock, Options or Convertible Securities issued pursuant to the acquisition of another corporation by the Corporation by merger, purchase of substantially all of the assets or other reorganization or to a joint venture agreement, provided that such issuances are approved by the Board of Directors; or

(vii) shares of Common Stock, Options or Convertible Securities issued in connection with sponsored research, collaboration, technology license, development, marketing or other similar agreements or strategic partnerships approved by the Board of Directors.

4.4.2 No Adjustment of Conversion Price. No adjustment in the Series A Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least a majority of the then outstanding shares of Series A Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment in the Series B Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least sixty-six and two-thirds percent (66 2/3%) of the then outstanding shares of Series B Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment in the Series C Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least a majority of the then outstanding shares of Series C Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Series C Original Issue Date shall issue any Options or Convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the Series A Conversion Price, Series B Conversion Price or Series C Conversion Price pursuant to the terms of Section 4.4.4, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the Conversion Price for such series of Preferred Stock computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Conversion Price as would have obtained had such revised terms been in effect upon the original

date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this clause (b) shall have the effect of increasing the Conversion Price for such series of Preferred Stock to an amount which exceeds the lower of (i) the applicable Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities which are themselves Exempted Securities), the issuance of which did not result in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Section 4.4.4 (either because the consideration per share (determined pursuant to Section 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than the applicable Conversion Price then in effect, or because such Option or Convertible Security was issued before the Series C Original Issue Date), are revised after the Series C Original Issue Date as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (2) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Section 4.4.3(a)) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of Section 4.4.4, such Conversion Price shall be readjusted to the Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the Conversion Price of any series of Preferred Stock provided for in this Section 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Section 4.4.3). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the Conversion Price of any series of Preferred Stock that would result under the terms of this Section 4.4.3 at the time of such issuance or amendment shall instead be effected

at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to such Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4 Adjustment of Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Series C Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Section 4.4.3), without consideration or for a consideration per share less than the Conversion Price for any series of Preferred Stock in effect immediately prior to such issue, then the Conversion Price for such series of Preferred Stock shall be reduced, concurrently with such issue, to a price (calculated to the nearest cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

- (a) "CP₂" means the applicable Conversion Price for such series of Preferred Stock in effect immediately after such issue of Additional Shares of Common Stock;
- (b) "CP₁" means the applicable Conversion Price for such series of Preferred Stock in effect immediately prior to such issue of Additional Shares of Common Stock;
- (c) "A" means the number of shares of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options outstanding immediately prior to such issue or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue);
- (d) "B" means the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP₁ (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP₁); and
- (e) "C" means the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5 Determination of Consideration. For purposes of this Section 4.4, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

- (a) Cash and Property: Such consideration shall:
 - (i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors; and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors.

(b) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Section 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing:

(i) The total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the Conversion Price for any series of Preferred Stock pursuant to the terms of Section 4.4.4, and such issuance dates occur within a period of no more than ninety (90) days from the first such issuance to the final such issuance, then, upon the final such issuance, the Conversion Price for such series of Preferred Stock shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the Series C Original Issue Date effect a subdivision of the outstanding Common Stock, the Conversion Price in effect for each series of Preferred Stock immediately before such subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in

proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Series C Original Issue Date combine the outstanding shares of Common Stock, the Conversion Price in effect for each series of Preferred Stock immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this section shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6 Adjustment for Certain Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series C Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable on the Common Stock in additional shares of Common Stock, then and in each such event the Conversion Price in effect for each series of Preferred Stock immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the applicable Conversion Price then in effect by a fraction:

(1) the numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(2) the denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the applicable Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter such Conversion Price shall be adjusted pursuant to this section as of the time of actual payment of such dividends or distributions; (b) no such adjustment shall be made to the Series A Conversion Price if the holders of Series A Preferred Stock simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of Series A Preferred Stock had been converted into Common Stock on the date of such event; (c) no such adjustment shall be made to the Series B Conversion Price if the holders of Series B Preferred Stock simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of Series B Preferred Stock had been converted into Common Stock on the date of such event; and (d) no such adjustment shall be made to the Series C Conversion Price if the holders of Series C Preferred Stock simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of Series C Preferred Stock had been converted into Common Stock on the date of such event.

4.7 Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series C Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a

dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of Common Stock in respect of outstanding shares of Common Stock) or in other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of Preferred Stock had been converted into Common Stock on the date of such event.

4.8 Adjustment for Merger or Reorganization, etc. Subject to the provisions of Section 2.3, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the Preferred Stock or any series thereof) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Sections 4.4, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of Preferred Stock not so converted or exchanged shall thereafter be convertible, in lieu of the Common Stock into which it was convertible prior to such event, into the kind and amount of securities, cash or other property which a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of the applicable series of Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of such Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the applicable Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of such Preferred Stock. For clarity, nothing in this Section 4.8 shall be construed as preventing the holders of Preferred Stock from seeking any appraisal rights to which they are otherwise entitled under applicable law in connection with a merger triggering an adjustment hereunder, nor shall this Section 4.8 be deemed conclusive evidence of the fair value of the shares of Preferred Stock in any such appraisal proceeding.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Conversion Price of any series of Preferred Stock pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than thirty (30) days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of such series of Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the applicable series of Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of any series of Preferred Stock (but in any event not later than ten (10) days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (i) the Conversion Price then in effect for such series of Preferred Stock, and (ii) the number of shares of Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the conversion of such Preferred Stock.

4.10 Notice of Record Date. In the event:

- (a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or
- (b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or
- (c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Preferred Stock and the Common Stock. Such notice shall be sent at least ten (10) days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1 Trigger Events. Upon either (a) the closing of the sale of shares of Common Stock to the public at a price of at least \$2.27 per share (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Common Stock), in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended (the “**Securities Act**”), resulting in at least \$50,000,000 of proceeds, net of the underwriting discount and commissions, to the Corporation or (b) subject to the provisions of Sections 3.4.1 and 3.5.1 hereof, the date and time, or the occurrence of an event, specified by vote or written consent of the holders of a majority of the outstanding shares of Preferred Stock (on an as-converted to Common Stock basis), voting together as a single class (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the “**Mandatory Conversion Time**”), then (i) all outstanding shares of Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective conversion rate as calculated pursuant to Section 4.1.1 and (ii) such shares may not be reissued by the Corporation.

5.2 Procedural Requirements. All holders of record of shares of Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of Preferred Stock in certificated form shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement

reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to Section 5, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender any certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of any certificate or certificates of such holders (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Section 5.4. As soon as practicable after the Mandatory Conversion Time, and, if applicable, the surrender of any certificate or certificates (or lost certificate affidavit and agreement) for Preferred Stock, the Corporation shall (a) issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof and (b) pay cash as provided in Section 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

6. Redemption. Other than as set forth in Section 2.3.2(b), the Preferred Stock is not redeemable.

7. Redeemed or Otherwise Acquired Shares. Any shares of Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Preferred Stock following redemption.

8. Waiver. Except as otherwise set forth herein, any of the rights, powers, preferences and other terms of the Preferred Stock set forth herein may be waived on behalf of all holders of Preferred Stock by the affirmative written consent or vote of the holders of at least a majority of the shares of Preferred Stock then outstanding; provided, however, that this Section 8 shall not be construed to permit the Corporation or holders of Preferred Stock to take, without the approval of the Requisite Series C Holders, any action that would otherwise require the approval of the Requisite Series C Holders hereunder.

9. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

FIFTH: Subject to any additional vote required by the Certificate of Incorporation or Bylaws, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

SIXTH: Subject to any additional vote required by the Certificate of Incorporation, the number of directors of the Corporation shall be determined in the manner set forth in the Bylaws of the Corporation.

SEVENTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

EIGHTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

NINTH: To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law or any other law of the State of Delaware is amended after approval by the stockholders of this Article Ninth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law as so amended.

Any repeal or modification of the foregoing provisions of this Article Ninth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

TENTH: To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Corporation (and any other persons to which General Corporation Law permits the Corporation to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the General Corporation Law.

Any amendment, repeal or modification of the foregoing provisions of this Article Tenth shall not adversely affect any right or protection of any director, officer or other agent of the Corporation existing at the time of such amendment, repeal or modification.

ELEVENTH: The Corporation renounces, to the fullest extent permitted by law, any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Excluded Opportunity. An “**Excluded Opportunity**” is any matter, transaction or interest that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of (i) any director of the Corporation who is not an employee of the Corporation or any of its subsidiaries, or (ii) any holder of Preferred Stock or any partner, member, director, stockholder, employee or agent of any such holder, other than someone who is an employee of the Corporation or any of its subsidiaries (collectively, “**Covered Persons**”), unless such matter, transaction or interest is presented to, or acquired, created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person’s capacity as a director of the Corporation.

TWELFTH: Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery in the State of Delaware shall be the sole and exclusive forum for any stockholder (including a beneficial owner) to bring (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation, its directors, officers or employees arising pursuant to any provision of the Delaware General Corporation Law or the Corporation's certificate of incorporation or bylaws or (iv) any action asserting a claim against the Corporation, its directors, officers or employees governed by the internal affairs doctrine, except for, as to each of (i) through (iv) above, any claim as to which the Court of Chancery determines that there is an indispensable party not subject to the jurisdiction of the Court of Chancery (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery within ten days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery, or for which the Court of Chancery does not have subject matter jurisdiction. If any provision or provisions of this Article Twelfth shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article Twelfth (including, without limitation, each portion of any sentence of this Article Twelfth containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) and the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby.

THIRTEENTH: For purposes of Section 500 of the California Corporations Code (to the extent applicable), in connection with any repurchase of shares of Common Stock permitted under this Certificate of Incorporation from employees, officers, directors or consultants of the Corporation in connection with a termination of employment or services pursuant to agreements or arrangements approved by the Board of Directors (in addition to any other consent required under this Certificate of Incorporation), such repurchase may be made without regard to any "preferential dividends arrears amount" or "preferential rights amount" (as those terms are defined in Section 500 of the California Corporations Code). Accordingly, for purposes of making any calculation under California Corporations Code Section 500 in connection with such repurchase, the amount of any "preferential dividends arrears amount" or "preferential rights amount" (as those terms are defined therein) shall be deemed to be zero (0).

* * *

3. That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation in accordance with Section 228 of the General Corporation Law.

4. That this Amended and Restated Certificate of Incorporation, which restates and integrates and further amends the provisions of this Corporation's Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

IN WITNESS WHEREOF, this Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 29th day of June, 2018.

By: /s/ Andrew Allen

Name: Andrew Allen

Title: President and Chief Executive Officer

BYLAWS
OF
GRITSTONE ONCOLOGY, INC.
(a Delaware corporation)

Adopted as of August 21, 2015

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BYLAWS

OF

GRITSTONE ONCOLOGY, INC.

(a Delaware corporation)

Adopted as of August 21, 2015

ARTICLE I.

IDENTIFICATION; OFFICES

Section 1. NAME. The name of the corporation is Gritstone Oncology, Inc. (the "Corporation").

Section 2. PRINCIPAL AND BUSINESS OFFICES. The Corporation may have such principal and other business offices, either within or outside of the state of Delaware, as the Board of Directors may designate or as the Corporation's business may require from time to time.

Section 3. REGISTERED AGENT AND OFFICE. The Corporation's registered agent may be changed from time to time by or under the authority of the Board of Directors. The address of the Corporation's registered agent may change from time to time by or under the authority of the Board of Directors, or the registered agent. The business office of the Corporation's registered agent shall be identical to the registered office. The Corporation's registered office may be but need not be identical with the Corporation's principal office in the state of Delaware. The Corporation's initial registered office shall be in the City of Wilmington, County of New Castle, State of Delaware.

Section 4. PLACE OF KEEPING CORPORATE RECORDS. The records and documents required by law to be kept by the Corporation permanently shall be kept at the Corporation's principal office or as the Board of Directors may designate.

ARTICLE II.

STOCKHOLDERS

Section 1. ANNUAL MEETING. An annual meeting of the stockholders shall be held on such date as may be determined by resolution of the Board of Directors. At each annual meeting, the stockholders shall elect directors to hold office for the term provided in Section 1 of Article III of these Bylaws.

Section 2. SPECIAL MEETING. A special meeting of the stockholders may be called by the President of the Corporation, the Board of Directors, or by such other officers or persons as the Board of Directors may designate.

Section 3. PLACE OF STOCKHOLDER MEETINGS. The Board of Directors may designate any place, either within or without the State of Delaware, as the place of meeting for any annual meeting or for any special meeting. If no such place is designated by the Board of Directors, the place of meeting will be the principal business office of the Corporation or the Board of Directors may, in its sole discretion, determine that the meeting shall not be held at any place, but will instead be held solely by means of remote communication as provided under Section 211 of the Delaware General Corporation Law.

Section 4. NOTICE OF MEETINGS. Unless waived as herein provided, whenever stockholders are required or permitted to take any action at a meeting, written notice of the meeting shall be given stating the place, if any, date and hour of the meeting, the means of remote communications, if any, by which stockholders may be deemed to be present in person and vote at such meeting and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Such written notice shall be given not less than ten (10) days nor more than sixty (60) days before the date of the meeting to each stockholder entitled to vote at the meeting. If mailed, notice is given when deposited in the United States mail, postage prepaid, directed to the stockholder at the stockholder's address as it appears on the records of the Corporation. If electronically transmitted, then notice is deemed given when transmitted and directed to a facsimile number or electronic mail address at which the stockholder has consented to receive notice. An affidavit of the secretary or of the transfer agent or other agent of the Corporation that the notice has been given by a form of electronic transmission shall, in the absence of fraud, be *prima facie* evidence of the facts stated therein.

When a meeting is adjourned to reconvene at the same or another place, if any, or by means of remote communications, if any, in accordance with Section 5 of Article II of these Bylaws, notice need not be given of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken.

Section 5. QUORUM AND ADJOURNED MEETINGS. Unless otherwise provided by law or the Corporation's Certificate of Incorporation, a majority of the shares entitled to vote, present in person or represented by proxy, shall constitute a quorum at a meeting of stockholders. If a majority of the shares entitled to vote at a meeting of stockholders is present in person or represented by proxy at such meeting, such stockholders may continue to transact business until adjournment, notwithstanding the withdrawal of such number of stockholders as may leave less than a quorum. If less than a majority of the shares entitled to vote at a meeting of stockholders is present in person or represented by proxy at such meeting, a majority of the shares so represented may adjourn the meeting from time to time, to reconvene at the same or another place, if any, or by means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, and notice need not be given of any such adjourned meeting if the time, date, place, if any, thereof, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken; provided, however, that if the adjournment is for more than thirty (30) days a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting. At the adjourned meeting the Corporation may transact any business that might have been transacted at the original meeting.

Section 6. FIXING OF RECORD DATE.

(a) For the purpose of determining stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than sixty (60) days nor less than ten (10) days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

(b) For the purpose of determining stockholders entitled to consent to corporate action in writing without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is established by the Board of Directors, and which date shall not be more than ten (10) days after the date on which the resolution fixing the record date is adopted by the Board of Directors. If no record date has been fixed by the Board of Directors, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is required by law, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal office, or an officer or agent of the Corporation having custody of the book in which the proceedings of meetings of stockholders are recorded. Delivery to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board of Directors and prior action by the Board of Directors is required by law, the record date for determining stockholders' consent to corporate action in writing without a meeting shall be the close of business on the day on which the Board of Directors adopts the resolution taking such prior action.

(c) For the purpose of determining the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect to any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix the record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty (60) days prior to such action. If no record date is fixed, the record date for determining the stockholders for any such purpose shall be the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

Section 7. VOTING LIST. The officer who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, for a period of at least ten (10) days prior to the meeting, (i) by a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (ii) during ordinary business hours, at the principal place of business of the Corporation. In the event that the Corporation determines to

make the list available on an electronic network, the Corporation may take reasonable steps to ensure that such information is available only to the stockholders of the Corporation. If the meeting is to be held at a place, then the list shall be produced and kept at the time and place of the meeting during the whole time thereof and may be inspected by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting. Except as otherwise provided by law, such list shall be the only evidence as to the identity of stockholders entitled to examine the list of stockholders required by this Section 7 or to vote in person or by proxy at any meeting of the stockholders. The Corporation shall not be required to include electronic mail addresses or other electronic contact information on such list.

Section 8. VOTING. Unless otherwise provided by the Certificate of Incorporation, each stockholder shall be entitled to one vote for each share of capital stock held by each stockholder. In all matters other than the election of directors, the affirmative vote of the majority of shares present in person or represented by proxy at the meeting and entitled to vote on the subject matter shall be the act of the stockholders. Directors shall be elected by plurality of the votes of the shares present in person or represented by a proxy at the meeting entitled to vote on the election of directors.

Section 9. PROXIES. Each stockholder entitled to vote at a meeting of stockholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons to act for him by proxy, but no such proxy shall be voted or acted upon after three (3) years from its date, unless the proxy provides for a longer period. A duly executed proxy shall be irrevocable if it states that it is irrevocable and if, and only as long as, it is coupled with an interest sufficient in law to support an irrevocable power. A proxy may remain irrevocable regardless of whether the interest with which it is coupled is an interest in the stock itself or an interest in the Corporation generally.

Section 10. RATIFICATION OF ACTS OF DIRECTORS AND OFFICERS. Except as otherwise provided by law or by the Certificate of Incorporation of the Corporation, any transaction or contract or act of the Corporation or of the directors or the officers of the Corporation may be ratified by the affirmative vote of the holders of the number of shares which would have been necessary to approve such transaction, contract or act at a meeting of stockholders, or by the written consent of stockholders in lieu of a meeting.

Section 11. INFORMAL ACTION OF STOCKHOLDERS. Any action required to be taken at any annual or special meeting of stockholders of the Corporation, or any action which may be taken at any annual or special meeting of such stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be delivered to the Corporation by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Prompt notice of the taking of the corporate action without a meeting by less than unanimous consent shall be given to those stockholders who have not consented in writing.

A telegram, cablegram or other electronic transmission consenting to an action to be taken and transmitted by a stockholder or proxy holder, or by a person or persons authorized to act for a stockholder or proxy holder, shall be deemed to be written, signed and dated for the purposes of this section, provided that any such telegram, cablegram or other electronic transmission sets forth or is delivered with information from which the Corporation can determine that the telegram, cablegram or other electronic transmission was transmitted by the stockholder or proxy holder or by a person or persons authorized to act for the stockholder or proxy holder and the date on which such stockholder or proxy holder or authorized person or persons transmitted such telegram, cablegram or electronic transmission. The date on which such telegram, cablegram or electronic transmission is transmitted shall be deemed to be the date on which such consent was signed. No consent given by telegram, cablegram or other electronic transmission shall be deemed to have been delivered until such consent is reproduced in paper form and until such paper form shall be delivered to the Corporation by delivery to its principal place of business or to an officer or agent of the Corporation having custody of the book in which the proceedings of meetings of stockholders are recorded. Any copy, facsimile or other reliable reproduction of a consent in writing may be substituted or used in lieu of the original writing for any and all purposes for which the original writing could be used, provided that such copy, facsimile or other reproduction shall be a complete reproduction of the entire original writing.

Section 12. ORGANIZATION. Such person as the Board of Directors may designate or, in the absence of such a designation, the president of the Corporation or, in his or her absence, such person as may be chosen by the holders of a majority of the shares entitled to vote who are present, in person or by proxy, shall call to order any meeting of the stockholders and act as chairman of such meeting. In the absence of the secretary of the Corporation, the chairman of the meeting shall appoint a person to serve as secretary at the meeting.

ARTICLE III. DIRECTORS

Section 1. NUMBER AND TENURE OF DIRECTORS. The number of directors of the Corporation shall be determined from time to time by the Board. Each director shall hold office until such director's successor is elected and qualified or until such director's earlier resignation or removal. Any director may resign at any time upon written notice to the Corporation.

Section 2. ELECTION OF DIRECTORS. Except as otherwise provided in these Bylaws, directors shall be elected at the annual meeting of stockholders. Directors need not be residents of the State of Delaware. Elections of directors need not be by written ballot.

Section 3. SPECIAL MEETINGS. Special meetings of the Board of Directors may be called by or at the request of the Chairman of the Board, the President or at least one-third of the number of directors constituting the whole board. The person or persons authorized to call special meetings of the Board of Directors may fix any time, date or place, either within or without the State of Delaware, for holding any special meeting of the Board of Directors called by them.

Section 4. NOTICE OF SPECIAL MEETINGS OF THE BOARD OF DIRECTORS. Notice of any special meeting of the Board of Directors shall be given, orally or in writing, by the person or persons calling the meeting to all directors at least one (1) day previous thereto. If mailed, such notice shall be deemed to be delivered when deposited in the United States Mail so addressed, with first-class postage thereon prepaid. If sent by any other means (including facsimile, courier, electronic mail or express mail, etc.), such notice shall be deemed to be delivered when actually delivered to the home or business address, electronic address or facsimile number of the director.

Section 5. QUORUM. A majority of the total number of directors as provided in Section 1 of Article III of these Bylaws shall constitute a quorum for the transaction of business. If less than a majority of the directors are present at a meeting of the Board of Directors, a majority of the directors present may adjourn the meeting from time to time without further notice.

Section 6. VOTING. The vote of the majority of the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors, unless the Delaware General Corporation Law or the Certificate of Incorporation requires a vote of a greater number.

Section 7. VACANCIES. Vacancies in the Board of Directors may be filled by a majority vote of the Board of Directors at a meeting at which a quorum is present or by an election either at an annual meeting or at a special meeting of the stockholders called for that purpose. Any directors elected by the stockholders to fill a vacancy shall hold office for the balance of the term for which he or she was elected. A director appointed by the Board of Directors to fill a vacancy shall serve until the next meeting of stockholders at which directors are elected.

Section 8. REMOVAL OF DIRECTORS. A director, or the entire Board of Directors, may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors; provided, however, that if cumulative voting obtains and less than the entire Board of Directors is to be removed, no director may be removed without cause if the votes cast against such director's removal would be sufficient to elect him if then cumulatively voted at an election of the entire Board of Directors; provided, further, that the directors elected by the holders of a particular class or series of stock may be removed without cause only by vote of the holders of a majority of the outstanding shares of such class or series.

Section 9. WRITTEN ACTION BY DIRECTORS. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors, or of any committee thereof, may be taken without a meeting if all members of the Board of Directors or committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board of Directors or committee. Without limiting the manner by which consent may be given, members of the Board of Directors may consent by delivery of an electronic transmission when such transmission is directed to a facsimile number or electronic mail address at which the Corporation has consented to receive such electronic transmissions, and copies of the electronic transmissions are filed with the minutes of proceedings of the Board of Directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

Section 10. PARTICIPATION BY CONFERENCE TELEPHONE. Members of the Board of Directors, or any committee designated by such board, may participate in a meeting of the Board of Directors, or committee thereof, by means of conference telephone or similar communications equipment as long as all persons participating in the meeting can speak with and hear each other, and participation by a director pursuant to this Section 3.10 shall constitute presence in person at such meeting.

Section 11. COMPENSATION OF DIRECTORS. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, the Board of Directors shall have the authority to fix the compensation of directors. The directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors and may be paid a fixed sum for attendance at each meeting of the Board of Directors or a stated salary as director. No such payment shall preclude any director from serving the Corporation in any other capacity and receiving compensation therefore. Members of special or standing committees may be allowed like compensation for attending committee meetings.

ARTICLE IV.
WAIVER OF NOTICE

Section 1. WRITTEN WAIVER OF NOTICE. A written waiver of any required notice, signed by or electronically transmitted by the person entitled to notice, whether before or after the date stated therein, shall be deemed equivalent to notice. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of stockholders, directors or members of a committee of directors need be specified in any written waiver of notice.

Section 2. ATTENDANCE AS WAIVER OF NOTICE. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting at the beginning of the meeting, and objects, to the transaction of any business because the meeting is not lawfully called or convened.

ARTICLE V.
COMMITTEES

Section 1. GENERAL PROVISIONS. The Board of Directors may, by resolution passed by a majority of the whole Board, designate one or more committees, each committee to consist of one or more of the directors of the Corporation. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member at any meeting of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board of Directors, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers which may require it, but no such committee shall have the power or authority in reference to the following matters: (i) approving or adopting, or recommending to the stockholders, any action or matter (other than the election or removal of directors) expressly required by law to be submitted to stockholders for approval or (ii) adopting, amending or repealing any bylaw of the corporation.

ARTICLE VI.
OFFICERS

Section 1. GENERAL PROVISIONS. The Board of Directors shall elect a President and a Secretary of the Corporation. The Board of Directors may also elect a Chairman of the Board, one or more Vice Chairmen of the Board, one or more Vice Presidents, a Treasurer, one or more Assistant Secretaries and Assistant Treasurers and such additional officers as the Board of Directors may deem necessary or appropriate from time to time. Any two or more offices may be held by the same person. The officers elected by the Board of Directors shall have such duties as are hereafter described and such additional duties as the Board of Directors may from time to time prescribe.

Section 2. ELECTION AND TERM OF OFFICE. The officers of the Corporation shall be elected annually by the Board of Directors at the regular meeting of the Board of Directors held after each annual meeting of the stockholders. If the election of officers is not held at such meeting, such election shall be held as soon thereafter as may be convenient. New offices of the Corporation may be created and filled and vacancies in offices may be filled at any time, at a meeting or by the written consent of the Board of Directors. Unless removed pursuant to Section 3 of Article VI of these Bylaws, each officer shall hold office until his successor has been duly elected and qualified, or until his earlier death or resignation. Election or appointment of an officer or agent shall not of itself create contract rights.

Section 3. REMOVAL OF OFFICERS. Any officer or agent elected or appointed by the Board of Directors may be removed by the Board of Directors whenever, in its judgment, the best interests of the Corporation would be served thereby, but such removal shall be without prejudice to the contract rights, if any, of the person(s) so removed.

Section 4. THE CHIEF EXECUTIVE OFFICER. The Board of Directors shall designate an individual who will be the Chief Executive Officer of the Corporation. The Chief Executive Officer shall be the principal executive officer of the Corporation and shall in general supervise and control all of the business and affairs of the Corporation, unless otherwise provided by the Board of Directors. The Chief Executive Officer shall preside at all meetings of the stockholders and of the Board of Directors and shall see that orders and resolutions of the Board of Directors are carried into effect. The Chief Executive Officer may sign bonds, mortgages, certificates for shares and all other contracts and documents whether or not under the seal of the Corporation except in cases where the signing and execution thereof shall be expressly delegated by law, by the Board of Directors or by these Bylaws to some other officer or agent of the Corporation. The Chief Executive Officer shall have general powers of supervision and shall be the final arbiter of all differences between officers of the Corporation and his decision as to any matter affecting the Corporation shall be final and binding as between the officers of the Corporation subject only to the Board of Directors.

Section 5. THE PRESIDENT. In the absence of the Chief Executive Officer or in the event of his inability or refusal to act, if the Chairman of the Board or another individual has not been designated Chief Executive Officer, the President shall perform the duties of the Chief Executive Officer, and when so acting, shall have all the powers of and be subject to all the restrictions upon the Chief Executive Officer. At all other times the President shall have the active

management of the business of the Corporation under the general supervision of the Chief Executive Officer. The President shall have concurrent power with the Chief Executive Officer to sign bonds, mortgages, certificates for shares and other contracts and documents, whether or not under the seal of the Corporation except in cases where the signing and execution thereof shall be expressly delegated by law, by the Board of Directors, or by these Bylaws to some other officer or agent of the Corporation. In general, the President shall perform all duties incident to the office of president and such other duties as the Chief Executive Officer or the Board of Directors may from time to time prescribe.

Section 6. THE CHAIRMAN OF THE BOARD. The Chairman of the Board, if one is chosen, shall be chosen from among the members of the board. If the Chairman of the Board has not been designated Chief Executive Officer, the Chairman of the Board shall perform such duties as may be assigned to the Chairman of the Board by the Chief Executive Officer or by the Board of Directors.

Section 7. THE VICE CHAIRMAN OF THE BOARD. In the absence of the Chief Executive Officer or in the event of his inability or refusal to act, if the Chairman of the Board or another individual has not been designated Chief Executive Officer, the Vice Chairman, or if there be more than one, the Vice Chairmen, in the order determined by the Board of Directors, shall perform the duties of the Chief Executive Officer, and when so acting shall have all the powers of and be subject to all the restrictions upon the Chief Executive Officer. At all other times, the Vice Chairman or Vice Chairmen shall perform such duties and have such powers as the Chief Executive Officer or the Board of Directors may from time to time prescribe.

Section 8. THE VICE PRESIDENT. In the absence of the President or in the event of his inability or refusal to act, the Vice President (or in the event there be more than one Vice President, the Executive Vice President and then the other Vice President or Vice Presidents in the order designated, or in the absence of any designation, then in the order of their election) shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President. The Vice Presidents shall perform such other duties and have such other powers as the Chief Executive Officer or the Board of Directors may from time to time prescribe.

Section 9. THE SECRETARY. The Secretary shall attend all meetings of the Board of Directors and all meetings of the stockholders and record all the proceedings of the meetings of the Corporation and of the Board of Directors in a book to be kept for that purpose and shall perform like duties for the standing committees when required. The Secretary shall give, or cause to be given, notice of all meetings of the stockholders and special meetings of the Board of Directors, and shall perform such other duties as may be prescribed by the Board of Directors or the Chief Executive Officer, under whose supervision he shall be. The Secretary shall have custody of the corporate seal of the Corporation and the Secretary, or an Assistant Secretary, shall have authority to affix the same to any instrument requiring it and when so affixed, it may be attested by his signature or by the signature of such Assistant Secretary. The Board of Directors may give general authority to any other officer to affix the seal of the Corporation and to attest the affixing by his signature.

Section 10. THE ASSISTANT SECRETARY. The Assistant Secretary, or if there be more than one, the Assistant Secretaries in the order determined by the Board of Directors (or if there be no such determination, then in the order of their election), shall, in the absence of the Secretary or in the event of his inability or refusal to act, perform the duties and exercise the powers of the Secretary and shall perform such other duties and have such other powers as the Chief Executive Officer or the Board of Directors may from time to time prescribe.

Section 11. THE TREASURER. The Treasurer shall have the custody of the corporate funds and securities and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the Corporation in such depositories as may be designated by the Board of Directors. The Treasurer shall disburse the funds of the Corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements, and shall render to the President and the Board of Directors, at its regular meetings, or when the Board of Directors so requires, an account of all his transactions as Treasurer and of the financial condition of the Corporation. If required by the Board of Directors, the Treasurer shall give the Corporation a bond (which shall be renewed every six (6) years) in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of his office and for the restoration to the Corporation, in case of his death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in his possession or under his control belonging to the Corporation.

Section 12. THE ASSISTANT TREASURER. The Assistant Treasurer, or if there shall be more than one, the Assistant Treasurers in the order determined by the Board of Directors (or if there be no such determination, then in the order of their election), shall, in the absence of the Treasurer or in the event of his inability or refusal to act, perform the duties and exercise the powers of the Treasurer and shall perform such other duties and have such other powers as the Chief Executive Officer or the Board of Directors may from time to time prescribe.

Section 13. OTHER OFFICERS, ASSISTANT OFFICERS AND AGENTS. Officers, Assistant Officers and Agents, if any, other than those whose duties are provided for in these Bylaws, shall have such authority and perform such duties as may from time to time be prescribed by resolution of the board of directors.

Section 14. ABSENCE OF OFFICERS. In the absence of any officer of the Corporation, or for any other reason the Board of Directors may deem sufficient, the Board of Directors may delegate the powers or duties, or any of such powers or duties, of any officers or officer to any other officer or to any director.

Section 15. COMPENSATION. The Board of Directors shall have the authority to establish reasonable compensation of all officers for services to the Corporation.

ARTICLE VII.
INDEMNIFICATION

Section 1. RIGHT TO INDEMNIFICATION OF DIRECTORS AND OFFICERS . The Corporation shall indemnify and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any person (a “Covered Person”) who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a “proceeding”), by reason of the fact that such person, or a person for whom such person is the legal representative, is or was a director or officer of the Corporation or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another Corporation or of a partnership, joint venture, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys’ fees) reasonably incurred by such Covered Person in such proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section 3 of Article VII of these Bylaws, the Corporation shall be required to indemnify a Covered Person in connection with a proceeding (or part thereof) commenced by such Covered Person only if the commencement of such proceeding (or part thereof) by the Covered Person was authorized in advance by the Board of Directors.

Section 2. PREPAYMENT OF EXPENSES OF DIRECTORS AND OFFICERS. The Corporation shall pay the expenses (including attorneys’ fees) incurred by a Covered Person in defending any proceeding in advance of its final disposition, provided, however, that, to the extent required by law, such payment of expenses in advance of the final disposition of the proceeding shall be made only upon receipt of an undertaking by the Covered Person to repay all amounts advanced if it should be ultimately determined that the Covered Person is not entitled to be indemnified under this Article VII or otherwise.

Section 3. CLAIMS BY DIRECTORS AND OFFICERS. If a claim for indemnification or advancement of expenses under this Article VII is not paid in full within thirty (30) days after a written claim therefor by the Covered Person has been received by the Corporation, the Covered Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim. In any such action the Corporation shall have the burden of proving that the Covered Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

Section 4. INDEMNIFICATION OF EMPLOYEES AND AGENTS. The Corporation may indemnify and advance expenses to any person who was or is made or is threatened to be made or is otherwise involved in any proceeding by reason of the fact that such person, or a person for whom such person is the legal representative, is or was an employee or agent of the Corporation or, while an employee or agent of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorney’s fees) reasonably incurred by such person in connection with such proceeding. The ultimate determination of entitlement to indemnification of persons who are non-director or officer employees or agents shall be made in such manner as is determined by the Board of Directors in its sole discretion. Notwithstanding the foregoing sentence, the Corporation shall not be required to indemnify a person in connection with a proceeding initiated by such person if the proceeding was not authorized in advance by the Board of Directors.

Section 5. **ADVANCEMENT OF EXPENSES OF EMPLOYEES AND AGENTS.** The Corporation may pay the expenses (including attorney's fees) incurred by an employee or agent in defending any proceeding in advance of its final disposition on such terms and conditions as may be determined by the Board of Directors.

Section 6. **NON-EXCLUSIVITY OF RIGHTS.** The rights conferred on any person by this Article VII shall not be exclusive of any other rights which such person may have or hereafter acquire under any statute, provision of the certificate of incorporation, these Bylaws, agreement, vote of stockholders or disinterested directors or otherwise.

Section 7. **OTHER INDEMNIFICATION.** The Corporation's obligation, if any, to indemnify any person who was or is serving at its request as a director, officer or employee of another Corporation, partnership, joint venture, trust, organization or other enterprise shall be reduced by any amount such person may collect as indemnification from such other Corporation, partnership, joint venture, trust, organization or other enterprise.

Section 8. **INSURANCE.** The Board of Directors may, to the full extent permitted by applicable law as it presently exists, or may hereafter be amended from time to time, authorize an appropriate officer or officers to purchase and maintain at the Corporation's expense insurance: (a) to indemnify the Corporation for any obligation which it incurs as a result of the indemnification of directors, officers and employees under the provisions of this Article VII; and (b) to indemnify or insure directors, officers and employees against liability in instances in which they may not otherwise be indemnified by the Corporation under the provisions of this Article VII.

Section 9. **AMENDMENT OR REPEAL.** Any repeal or modification of the foregoing provisions of this Article VII shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification. The rights provided hereunder shall inure to the benefit of any Covered Person and such person's heirs, executors and administrators.

ARTICLE VIII. **CERTIFICATES FOR SHARES**

Section 1. **CERTIFICATES OF SHARES.** The shares of the Corporation shall be represented by certificates, provided that the Board of Directors of the Corporation may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation. Notwithstanding the adoption of such a resolution by the Board of Directors, every holder of stock represented by certificates and upon request every holder of uncertificated shares shall be entitled to have a certificate signed by, or in the name of the Corporation by the Chairman or Vice Chairman of the Board of Directors, Chief Executive Officer, or the President or Vice President, and by the Treasurer or an Assistant Treasurer, or the Secretary or an Assistant Secretary of the Corporation representing the number of shares registered in certificate form. Any or all the signatures on the certificate may be a facsimile.

Section 2. SIGNATURES OF FORMER OFFICER, TRANSFER AGENT OR REGISTRAR. In case any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if such person or entity were such officer, transfer agent or registrar at the date of issue.

Section 3. TRANSFER OF SHARES. Transfers of shares of the Corporation shall be made only on the books of the Corporation by the holder of record thereof or by his legal representative, who shall furnish proper evidence of authority to transfer, or by his or her attorney thereunto authorized by power of attorney duly executed and filed with the Secretary of the Corporation, and on surrender for cancellation of certificate for such shares. Prior to due presentment of a certificate for shares for registration of transfer, the Corporation may treat a registered owner of such shares as the person exclusively entitled to vote, to receive notifications and otherwise have and exercise all of the right and powers of an owner of shares.

Section 4. LOST, DESTROYED OR STOLEN CERTIFICATES. Whenever a certificate representing shares of the Corporation has been lost, destroyed or stolen, the holder thereof may file in the office of the Corporation an affidavit setting forth, to the best of his knowledge and belief, the time, place, and circumstance of such loss, destruction or theft together with a statement of indemnity sufficient in the opinion of the Board of Directors to indemnify the Corporation against any claim that may be made against it on account of the alleged loss of any such certificate. Thereupon the Board may cause to be issued to such person or such person's legal representative a new certificate or a duplicate of the certificate alleged to have been lost, destroyed or stolen. In the exercise of its discretion, the Board of Directors may waive the indemnification requirements provided herein.

ARTICLE IX. DIVIDENDS

Section 1. DECLARATIONS OF DIVIDENDS. Dividends upon the capital stock of the Corporation, subject to the provisions of the Certificate of Incorporation, if any, may be declared by the Board of Directors at any regular or special meeting, pursuant to law. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Certificate of Incorporation.

Section 2. REQUIREMENTS FOR PAYMENT OF DIVIDENDS. Before payment of any dividend there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the directors from time to time, in their absolute discretion, think proper as a reserve fund to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for such other purpose as the directors shall think conducive to the interests of the Corporation, and the directors may abolish any such reserve.

ARTICLE X.
GENERAL PROVISIONS

Section 1. **CONTRACTS.** The Board of Directors may authorize any officer or officers, agent or agents, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

Section 2. **LOANS.** No loans shall be contracted on behalf of the Corporation and no evidences of indebtedness shall be issued in its name unless authorized by a resolution of the Board of Directors. Such authority may be general or confined to specific instances.

Section 3. **CHECKS, DRAFTS, ETC..** All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporation shall be signed by one or more officers or agents of the Corporation and in such manner as shall from time to time be determined by resolution of the Board of Directors.

Section 4. **DEPOSITS.** The funds of the Corporation may be deposited or invested in such bank account, in such investments or with such other depositaries as determined by the Board of Directors.

Section 5. **FISCAL YEAR.** The fiscal year of the Corporation shall be fixed by resolution of the Board of Directors.

Section 6. **SEAL.** The corporate seal shall have inscribed thereon the name of the Corporation, the year of its organization and the words "Corporate Seal, Delaware". Said seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

Section 7. **ANNUAL STATEMENT.** The Board of Directors shall present at each annual meeting, and at any special meeting of the stockholders when called for by vote of the stockholders, a full and clear statement of the business and condition of the Corporation.

ARTICLE XI.
RIGHT OF FIRST REFUSAL

Section 1. **RIGHT OF FIRST REFUSAL.** No stockholder shall sell, assign, pledge, or in any manner transfer any of the shares of Common Stock of the corporation ("Common Stock") or any right or interest therein, whether voluntarily or by operation of law, or by gift or otherwise, except by a transfer which meets the requirements hereinafter set forth in this bylaw:

(a) If the stockholder receives from anyone a bona fide offer acceptable to the stockholder to purchase any Common Stock held by such stockholder, then the stockholder shall first give written notice thereof to the Corporation. The notice shall name the proposed transferee and state the number of shares of Common Stock to be transferred, the price per share and all other terms and conditions of the offer.

(b) For fifteen (15) days following receipt of such notice, the corporation or its assigns shall have the option to purchase all or, with the consent of the stockholder, any lesser part of the Common Stock specified in the notice at the price and upon the terms set forth in such bona fide offer. In the event the Corporation elects to purchase all or, as agreed by the stockholder, a lesser part, of the Common Stock, it shall give written notice to the selling stockholder of its election and settlement for said Common Stock shall be made as provided below in paragraph (c).

(c) In the event the Corporation elects to acquire any of the Common Stock of the selling stockholder as specified in said selling stockholder's notice, the Secretary of the Corporation shall so notify the selling stockholder and settlement thereof shall be made in cash within thirty (30) days after the Secretary of the Corporation receives said selling stockholder's notice; provided that if the terms of payment set forth in said selling stockholder's notice were other than cash against delivery, the Corporation shall pay for said Common Stock on the same terms and conditions set forth in said selling stockholder's notice.

(d) In the event the Corporation does not elect to acquire all of the Common Stock specified in the selling stockholder's notice, said selling stockholder may, within the sixty (60) day period following the expiration of the option rights granted to the Corporation, sell elsewhere the Common Stock specified in said selling stockholder's notice which were not acquired by the Corporation, in accordance with the provisions of paragraph (c) of this bylaw, provided that said sale shall not be on terms and conditions more favorable to the purchaser than those contained in the bona fide offer set forth in said selling stockholder's notice. All Common Stock so sold by said selling stockholder shall continue to be subject to the provisions of this bylaw in the same manner as before said transfer.

(e) Anything to the contrary contained herein notwithstanding, the following transactions shall be exempt from the provisions of this bylaw:

(1) A stockholder's transfer of any or all Common Stock held either during such stockholder's lifetime or on death by will or intestacy to such stockholder's Immediate Family. "Immediate Family," as used herein shall mean spouse, lineal descendent, father, mother, brother, or sister of the stockholder making such transfer.

(2) A stockholder's transfer to a trust for the benefit of any stockholder or member of the stockholder's Immediate Family or other transfers for estate planning purposes.

(3) A stockholder's bona fide pledge or mortgage of any Common Stock with a commercial lending institution, provided that any subsequent transfer of said Common Stock by said institution shall be conducted in the manner set forth in this bylaw.

(4) A stockholder's transfer of any or all of such stockholder's Common Stock to any other stockholder of the Corporation.

(5) A stockholder's transfer of any or all of such stockholder's Common Stock to a person who, at the time of such transfer, is an officer or director of the Corporation.

(6) A corporate stockholder's transfer of any or all of its Common Stock pursuant to and in accordance with the terms of any merger, consolidation, reclassification of Common Stock or capital reorganization of the corporate stockholder, or pursuant to a sale of all or substantially all of the stock or assets of a corporate stockholder.

(7) A corporate stockholder's transfer of any or all of its Common Stock to any or all of its stockholders.

(8) A transfer of any or all of the Common Stock held by a stockholder which is a limited or general partnership to any or all of its partners.

In any such case, the transferee, assignee, or other recipient shall receive and hold such Common Stock subject to the provisions of this bylaw, and there shall be no further transfer of such Common Stock except in accord with this bylaw.

(f) The provisions of this bylaw may be waived with respect to any transfer either by the Corporation, upon duly authorized action of its Board of Directors, or by the stockholders, upon the express written consent of the owners of a majority of the voting power of the Corporation (excluding the votes represented by those shares of Common Stock to be sold by the selling stockholder). This bylaw may be amended or repealed either by a duly authorized action of the Board of Directors or by the stockholders, upon the express written consent of the owners of a majority of the voting power of the corporation.

(g) Any sale or transfer, or purported sale or transfer, of Common Stock shall be null and void unless the terms, conditions, and provisions of this bylaw are strictly observed and followed.

(h) The foregoing right of first refusal shall terminate on either of the following dates, whichever shall first occur:

(1) On August 21, 2025, or

(2) Upon the date Common Stock of the Corporation is first offered to the public pursuant to a registration statement filed with, and declared effective by, the Securities and Exchange Commission under the Securities Act of 1933, as amended. The certificates representing the Common Stock shall bear the following legend so long as the foregoing right of first refusal remains in effect:

“THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO A RIGHT OF FIRST REFUSAL OPTION IN FAVOR OF THE CORPORATION, AS PROVIDED IN THE BYLAWS OF THE CORPORATION.”

(i) The provisions of this bylaw shall not apply to any transfer of shares of Preferred Stock of the Corporation or the shares of Common Stock issued upon conversion thereof.

ARTICLE XII. AMENDMENTS

Section 1. AMENDMENTS. These Bylaws may be altered, amended or repealed or new Bylaws may be adopted by the stockholders or by the Board of Directors, when such power is conferred upon the Board of Directors by the Certificate of Incorporation, at any regular meeting of the stockholders or of the Board of Directors or at any special meeting of the stockholders or of the Board of Directors if notice of such alteration, amendment, repeal or adoption of new Bylaws be contained in the notice of such special meeting. If the power to adopt, amend or repeal Bylaws is conferred upon the Board of Directors by the Certificate of Incorporation it shall not divest or limit the power of the stockholders to adopt, amend or repeal Bylaws.

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

LICENSE AGREEMENT

by and between

GRITSTONE ONCOLOGY, INC.

on the one hand,

and

ARBUTUS BIOPHARMA CORPORATION

and

PROTIVA BIOTHERAPEUTICS INC.,

on the other hand

Dated as of October 16, 2017

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LICENSE AGREEMENT

This LICENSE AGREEMENT (this "Agreement") is entered into as of October 16, 2017 (the "Effective Date"), by and between (a) Gritstone Oncology, Inc., a Delaware corporation having a place of business at 5858 Horton Street, Suite 210, Emeryville, California 94608, U.S.A. ("Gritstone"), on the one hand, and (b) Protiva Biotherapeutics Inc., a British Columbia corporation with a principal place of business at 100-8900 Glenlyon Parkway, Burnaby, B.C., Canada V5J 5J8 ("Protiva"), and Arbutus Biopharma Corporation, a British Columbia corporation with a principal place of business at 100-8900 Glenlyon Parkway, Burnaby, B.C., Canada V5J 5J8 ("ABUS" and together with Protiva, "Arbutus"), on the other hand. Capitalized terms when used in this Agreement have the meanings set forth in Article I.

WHEREAS, Arbutus and its Affiliates possess, develop and improve from time to time Licensed Intellectual Property;

WHEREAS, Gritstone wishes to apply the Licensed Intellectual Property to therapies consisting of LNP formulations for intracellular delivery of RNA that encodes TSNA; and

WHEREAS, Arbutus desires to grant Gritstone licenses to Licensed Intellectual Property to Research, Develop, Manufacture and Commercialize the Product(s) upon the terms and subject to the conditions set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and other good and valuable consideration, the receipt of which is hereby acknowledged, Gritstone and Arbutus enter into this Agreement effective as of the Effective Date:

ARTICLE I - DEFINITIONS

1.1 General. When used in this Agreement, each of the following terms, whether used in the singular or plural, shall have the meanings set forth in this Article I.

"ABUS" has the meaning set forth in the introductory paragraph.

"Acuitas Agreement" means that certain Cross-License Agreement by and among ABUS, Protiva and Acuitas Therapeutics, Inc. ("Acuitas") dated November 12, 2012.

"Affiliate" means, with respect to a Person, any corporation, company, partnership, joint venture or firm that controls, is controlled by, or is under common control with such Person. For purposes of the foregoing sentence, "control" means (a) in the case of corporate entities, direct or indirect ownership of at least fifty percent (50%) of the stock or shares having the right to vote for the election of directors, or (b) in the case of non-corporate entities, direct or indirect ownership of at least fifty percent (50%) of the equity interest with the power to direct the management and policies of such non-corporate entities.

"Agreement" has the meaning set forth in the introductory paragraph.

"Alliance Manager" has the meaning set forth in Section 3.1(f).

“Applicable Laws” means all applicable laws, statutes, rules, regulations, guidelines, guidances, ordinances, orders, decrees, writs, judicial or administrative decisions and the like of any nation or government, any state or other political subdivision thereof, any entity exercising executive, judicial, regulatory or administrative functions of or pertaining to government (including any Governmental Authority), any tribunal or arbitrator of competent jurisdiction, and any trade organization whose regulations have the force of law.

“Arbutus” has the meaning set forth in the introductory paragraph.

“Arbutus Background IP” means any and all Intellectual Property, including the LNP Technology and Arbutus Patents, Controlled by Arbutus or its Affiliates as of the Effective Date or created by Arbutus or its Affiliates after the Effective Date outside of the performance of the Research Plan, in each case that relates to any aspect of LNPs, but specifically excluding the Excluded Arbutus Patents.

“Arbutus Change of Control Event” means an event whereby Arbutus consummates a Change of Control with [***].

“Arbutus Improvement IP” has the meaning set forth in Section 6.1(a)(iii).

“Arbutus Indemnitees” has the meaning set forth in Section 8.2.

“Arbutus LNP” means an LNP, the composition and/or method of making or use of which is covered by the Licensed Intellectual Property.

“Arbutus Patents” means, other than the Excluded Arbutus Patents, any and all Patents Controlled by Arbutus or any of its Affiliates at any time during the Term that include one or more claims that Cover (i) LNPs, including LNP Technology, (ii) Arbutus Background IP, and/or (iii) Arbutus Improvement IP, including the Patents listed in Exhibit A. For clarity, Arbutus Patents shall not include any Product Patents.

“Arbutus Sole IP” has the meaning set forth in Section 6.1(d)(ii).

“Boost” means a vaccine administered subsequent to administration of Prime vaccine.

“Business Day” means any day that is not a Saturday, a Sunday, or other day which is a statutory holiday in the Province of British Columbia, Canada or a state or federal holiday in the State of New York.

“Calendar Quarter” means the respective periods of three (3) consecutive calendar months ending on March 31, June 30, September 30 and December 31.

“Calendar Year” means a period of twelve (12) consecutive calendar months ending on December 31.

“Change of Control” means the occurrence of any of the following: (a) a Party consummates a merger, consolidation, stock sale or other similar transaction or series of transactions with another Person pursuant to which: (i) the individuals and entities that were the beneficial owners of the outstanding voting securities of such Party immediately prior to such transaction beneficially own, directly or indirectly, less than fifty percent (50%) of the combined voting power of the then outstanding voting securities entitled to vote generally in the election of directors or similar governing persons of the corporation or other entity resulting from such transaction (“Successor”) in substantially the same proportions as their ownership immediately prior to such transaction of such outstanding voting securities, or (ii) less than fifty percent (50%) of the members of the Board of Directors or similar governing body of the Successor were members of the Board of Directors of such Party at the time of the execution of the initial agreement; *provided, however*, that a stock sale to underwriters of a public offering of such Party’s capital stock shall not constitute a Change of Control; or (b) a Party enters into a sale or transfer of all or substantially all of its assets relating to this Agreement.

“CMC” means Chemistry, Manufacturing, and Controls, or Pharmaceutical Quality/CMC, as such terms are defined by the regulations of the applicable Regulatory Authority, including as required for Module 3 per International Conference on Harmonisation M4Q.

“CMO” means a Third Party contract manufacturing organization.

“Code” has the meaning set forth in Section 2.4.

“Commercialize” or “Commercialization” means, excluding Manufacturing, any and all activities directed to marketing, promoting, distributing, importing, having imported, exporting, having exported, selling and having sold products and services, including, subject to the terms of this Agreement, having Third Parties conduct such activities on behalf of the Person receiving the rights to Commercialize.

“Commercial Milestone” has the meaning set forth in Section 4.3(a).

“Commercial Milestone Payment” has the meaning set forth in Section 4.3(a).

“Commercially Reasonable Efforts” means the efforts and resources that would reasonably be used (including the promptness with which such efforts and resources would be applied) by a similarly sized company within the biopharmaceutical industry for the pharmaceutical or clinical development, manufacture or commercialization of a pharmaceutical product of similar market and profit potential and at a similar stage in development or product life as compared to a Product or for the other activities to which this term applies, taking into account its present and future

market and commercial potential (including competitive market conditions, patent coverage, regulatory exclusivity, the size of the particular market in the applicable country for the relevant indication, and the probability of profitability of the relevant product or service in light of existing and anticipated competitive products and services, as well as pricing and reimbursement issues) and all other relevant factors, including commercial, technical, legal, scientific, regulatory, or medical factors, including such Product's efficacy, safety, existing and anticipated approved labeling, and post-approval requirements, in each case in the applicable country.

"Confidential Information" means all confidential information and confidential materials, patentable or otherwise, of a Party disclosed by or on behalf of such Party to the other Party before, on or after the Effective Date in connection with the discussions and negotiations pertaining to, or in the course of performing, this Agreement, including chemical composition of a formulation in LNPs, chemical substances, equipment, data, reports, Know-How, sources of supply, patent positioning, business plans, and also the proprietary and confidential information of Third Parties in possession of such Party under an obligation of confidentiality, whether or not related to making, using or selling a Product.

"Control," "Controls" or "Controlled by" means, with respect to intellectual property, the possession of (whether by ownership or license, other than pursuant to this Agreement), that provides a Party, as applicable, with the ability to grant access to, or a license or sublicense of, such intellectual property.

"Cover," "Covers" or "Covered by" means, with respect to a Product, that the making, using, selling, offering for sale or importing of a Product or practice of a method with respect to the Manufacture or use of such a Product would, but for the licenses granted under this Agreement, infringe a Valid Claim of a Patent in the country in which such activity occurs.

"Develop," "Developing" or "Development" means, excluding Manufacturing, any and all activities and studies required to develop products and services for Marketing Authorization Approval or for Commercialization, including, subject to the terms of this Agreement, having Third Parties conduct such activities and studies on behalf of the Person receiving the rights to Develop.

"Development Milestone" has the meaning set forth in Section 4.2(a).

"Development Milestone Payment" has the meaning set forth in Section 4.2(a).

"Disclosing Party" means the Party that discloses its Confidential Information.

"Effective Date" has the meaning set forth in the introductory paragraph.

“EMA” means the European Medicines Agency, a body of the European Union, or any successor agency(ies) thereof performing similar functions.

“EU” means any country that is a member of the European Union as of the Effective Date.

“Excluded Arbutus Patents” means those Patents that are the subject of the UBC Agreement as of the Effective Date, as set forth on Exhibit C, and any Patents that claim the benefit of priority to an application that issued as any such Patent.

“Executive Officer” means (a) in the case of Gritstone, any senior executive officer of Gritstone or any of its Affiliates who is not a member of the JSC; and (b) in the case of Arbutus, any senior executive officer of Arbutus or any of its Affiliates who is not a member of the JSC.

“FDA” means the Food and Drug Administration of the United States Department of Health and Human Services, or any successor agency(ies) thereof performing similar functions.

“Field” means human therapeutic applications, including treatment, prevention, palliation, and amelioration of human diseases and conditions.

“First Commercial Sale” means, on a country-by-country basis, the first *bona fide* sale of a Product to a non-Sublicensee Third Party in an arm’s length transaction after Marketing Authorization Approval of such Product in such country for use of such Product in such country. Sales of a Product for registration samples, compassionate use sales, named patient use, inter-company transfers to Affiliates of a Party and the like shall not constitute a “First Commercial Sale”.

“FTE” means full time employee or consultant.

“FTE Rate” means the fully burdened rate established by the Parties for the services of an employee or consultant, which, for the first year of this Agreement, is [***] Dollars (\$[***]) based on [***] hours per year, or pro-rata portion thereof, subject to an annual increase by a percentage equal to the percentage increase in the Consumer Price Index for the US City Average (all times) for the twelve (12) month period ending with December of the calendar year immediately preceding the anniversary date of the Effective Date.

“GAAP” means U.S. generally accepted accounting principles as in effect from time to time, consistently applied.

“Good Laboratory Practices” or “GLP” means the regulations set forth in 21 C.F.R. Part 58 and the requirements expressed or implied thereunder imposed by the FDA and (as applicable) any comparable regulatory standards, practices and procedures promulgated by the EMA or other Regulatory Authority applicable to the Territory, as they may be updated from time to time, including applicable quality guidelines promulgated under the International Conference on Harmonisation.

“Good Manufacturing Practices” or “GMP” means the regulations set forth in 21 C.F.R. Parts 210–211, 820 and 21 C.F.R. Subchapter C (Drugs), Quality System Regulations and the requirements thereunder imposed by the FDA, and any comparable regulatory standards, practices and procedures promulgated by the EMA or other Regulatory Authority applicable to the Territory, as they may be updated from time to time, including applicable quality guidelines promulgated under the International Conference on Harmonisation.

“Governmental Authority” means any United States or supra-national, foreign, federal, state, local, provincial, or municipal government, governmental, regulatory or administrative authority, agency, body, branch, bureau, instrumentality or commission or any court, tribunal, or judicial or arbitral body having relevant jurisdiction over a subject matter, including any Regulatory Authority.

“Gritstone” has the meaning set forth in the introductory paragraph.

“Gritstone Background IP” means any and all Intellectual Property Controlled by Gritstone or its Affiliates as of the Effective Date or created by Gritstone or its Affiliates after the Effective Date outside of the performance of the Research Plan, in each case that relates to [***].

“Gritstone Indemnitees” has the meaning set forth in Section 8.1.

“Gritstone IP” has the meaning set forth in Section 6.1(c).

“Gritstone Sole IP” has the meaning set forth in Section 6.1(d)(iii).

“Heterologous System” means a heterologous Prime-Boost treatment regimen in which [***].

“Homologous System” means a homologous Prime-Boost treatment regimen in which [***].

“IND” or “Investigational New Drug Application” shall mean an investigational new drug application required by the FDA and submitted by Gritstone in order to conduct an initial Phase I Study for the experimental form of a Product, and any equivalent application required by any governmental authority anywhere in the world in order to conduct an initial Phase I Study for such Product. For clarity, for purposes of this Agreement, a single IND encompasses both: (a) multiple IND numbers issued by the governmental authority when the subsequent IND numbers are issued for administrative convenience or other administrative purposes, and (b) all applications in jurisdictions outside the United States that involve substantially the same indications, protocols, and other information as submitted in the IND submitted to the FDA.

“Indemnified Party” has the meaning set forth in Section 8.3.

“Indemnifying Party” has the meaning set forth in Section 8.3.

“Infringement Action” has the meaning set forth in Section 6.3(a).

“Initiation of dosing of First Phase III Study” means the first dosing of a patient in the first Phase III Study conducted by Gritstone, its Affiliate or Sublicensee.

“Initiation of dosing of Second Phase I Study” means the first dosing of a subject in the second Phase I Study conducted by Gritstone, its Affiliate or Sublicensee.

“Initiation of dosing of Second Phase III Study” means the first dosing of a subject in the second Phase III Study conducted by Gritstone, its Affiliate or Sublicensee.

“Initiation of dosing of Third Phase I Study” means the first dosing of a subject in the third Phase I Study conducted by Gritstone, its Affiliate or Sublicensee.

“Initiation of dosing of Third Phase III Study” means the first dosing of a subject in the third Phase III Study conducted by Gritstone, its Affiliate or Sublicensee.

“Insolvent Party” has the meaning set forth in Section 9.6.

“Intellectual Property” means Patents, Know-How, trade names, trademarks, copyright, trade dress, industrial and other designs, trade secrets, and all other forms of intellectual property, all whether or not registered, or capable of registration.

“Joint IP” has the meaning set forth in Section 6.1(d)(iv).

“Joint Patents” means Patents that cover Joint IP.

“JSC” has the meaning set forth in Section 3.1(a).

“Know-How” means biological materials and other tangible materials, information, data, inventions, practices, methods, methodologies, protocols, formulas, formulations, oligonucleotide sequences, knowledge, trade secrets, processes, assays, skills, techniques and results of experimentation and testing, patentable or otherwise.

“Licensed Intellectual Property” means any and all Intellectual Property that is [***] for the Research, Development, Manufacture or Commercialization of the Products for use in the Field in the Territory, including any Arbutus Background IP, Arbutus Improvement IP, Arbutus’ interest in Joint IP, Arbutus Patents, LNP Technology, and Know-How Controlled by Arbutus or its Affiliates as of the Effective Date or during the Term that is directed to any aspect of LNPs. Notwithstanding anything to the contrary in the foregoing, Licensed Intellectual Property excludes the Excluded Arbutus Patents.

“LNP(s)” means lipid nanoparticles (excluding encapsulated drug, such as Payload(s)), components of lipid nanoparticles, and methods of manufacturing lipid nanoparticles, including (i) the [***], (ii) the [***] or (iii) [***]. For clarity, “LNP” does not include Payload(s).

“LNP Competitor” means (a) any company listed on Exhibit D and any of their respective Affiliates as of the Effective Date; and (b) in the event of a Change of Control of any company listed on Exhibit D, the Successor to such company resulting from such Change of Control, *provided* that [***].

“LNP Technology” means the Intellectual Property directed to (a) the composition of matter of LNPs, (b) the method of use of LNPs, (c) the method of manufacturing LNPs, and/or (d) the physical characteristics of LNPs, including [***], in each case, Controlled by Arbutus or any of its Affiliates at any time during the Term.

“Losses” has the meaning set forth in Section 8.1.

“Manufacture” or “Manufacturing” means, with respect to a Product or its components (including LNPs), all activities associated with the production, manufacture and processing of such Product, and the filling, finishing, packaging, labeling, shipping, and storage of such product, including formulation process scale-up for GLP toxicology and clinical study use, aseptic fill and finish, stability testing, analytical development, quality assurance and quality control, and the production of the bulk finished dosage form of such Product in compliance with GMP. For clarity, Manufacture includes the manufacture of LNPs, for the sole purpose of the formulation of and manufacture of Products.

“Manufacturing Know-How” means (a) all Know-How used by Arbutus and its Affiliates (or their contractors) [***] to Manufacture the Product (including manufacturing, process engineering, SOPs, documents relating to the production process, data, information and results (e.g., batch records, deviation reports, in process tracking and trending data, analytical testing, development and validation reports, vendor audits, etc.) relating to the production process); and (b) any other Know-How that is [***] to Manufacture the Product in compliance with GMP requirements, including the identity, amounts and assurance quality of ingredients, the manufacturing processes and controls, specifications, technology, inventions, assays, quality control and testing procedures, and batch records.

“Manufacturing Facility” has the meaning set forth in Section 3.4(a).

“Marketing Authorization Approval” means, with respect to any country or region, any registration, license, approval or authorization from any Regulatory Authority required for the Development, Manufacture or Commercialization of a Product in a regulatory jurisdiction in such country or region, including any pricing or reimbursement approval required by Applicable Laws to obtain such registration, license, approval or authorization.

“Necessary Third Party IP” means with respect to any country in the Territory, on a country-by-country basis, any issued Patent in such country owned or controlled by a Third Party that (a) Covers Products, (b) is related to LNP delivery, and (c) is necessary to Develop and/or Commercialize Products. For clarity, “Necessary Third Party IP” excludes any issued Patent owned or controlled by a Third Party that Covers only Payload IP.

“Net Sales” means the gross amount [***] by Gritstone, its Affiliates or Sublicensees on sales or other dispositions in the Territory of a Product during a Royalty Payment Term to Third Parties that are not Affiliates or Sublicensees of Gritstone, less:

(a) normal and customary cash, trade, quantity or prompt settlement discounts (including chargebacks and allowances) actually allowed, including any actually granted to trade customers, managed health care organizations, pharmaceutical benefit managers, group purchasing organizations and national, state, or local government, and any other adjustments, including those granted on account of price adjustments and billing errors, and including any retroactive price reductions that are actually allowed or granted;

(b) amounts repaid or credited by reason of rejection, returns or recalls of goods, rebates or *bona fide* price reductions determined by Gritstone or its Affiliates in good faith, and uncollectible amounts on previously sold Products;

(c) rebates and similar payments made with respect to sales paid for by managed care organizations, hospitals, other buying groups or any governmental or regulatory authority including federal or state Medicaid, Medicare or similar state program in the United States or equivalent governmental program in any other country and refunds made in connection with revenue or cost caps agreed with such organizations or entities;

(d) excise taxes, customs duties, customs levies and import fees and other taxes imposed on the sale, importation, use or distribution of the Products;

(e) administrative fees paid to group purchasing organizations, managed care entities or other similar types of organizations or networks participating in the distribution or sales of the Product;

(f) amounts paid or credited to customers for inventory management services;

(g) that portion of the annual fee on prescription drug manufacturers imposed by the Patient Protection and Affordable Care Act, Pub. L. No. 111-148 (as amended) that is reasonably allocated to the sale of Products;

(h) any other similar and customary deductions that are consistent with GAAP or in the case of non-United States sales, other applicable accounting standards; and

(i) payments made for separately itemized insurance and transportation costs incurred in shipping Product, including packaging, freight, postage, shipping, transportation, warehousing, handling and insurance charges, in each case actually allowed or paid for the delivery of Product, and any customary payments with respect to Product actually made to wholesalers or other distributors, in each case actually allowed or paid for distribution and delivery of Product, to the extent billed or recognized.

Net Sales shall be determined from books and records maintained in accordance with GAAP, consistently applied. Nothing herein shall prevent Gritstone or any of its Affiliates or Sublicensees from selling, distributing or invoicing any Product at a discounted price to Third Parties in connection with clinical studies, compassionate or named patient sales, or an indigent program or similar bona fide arrangements in which such party agrees to forego a normal profit margin for good faith business reasons. To the extent that Gritstone or its Affiliates or Sublicensees receives any consideration other than monies for the sale of Products, Net Sales shall include the fair market value of such consideration. For the avoidance of doubt, the supply of Products free of charge shall not be included in Net Sales, and transfer of a Product between Gritstone and any of its Affiliates or Sublicensees for resale shall be excluded from the computation of Net Sales, but the subsequent resale of such Product to a Third Party shall be included within the computation of Net Sales.

If a Product is formulated, packaged or sold with one or more other active ingredients or products for a single price (a "Combination Product"), the Net Sales of the Product shall be calculated for each applicable Calendar Quarter by multiplying the Net Sales (as determined without reference to this paragraph) of the Combination Product by the fraction $A/(A+B)$, where A is the average gross selling price in the applicable country of the Product(s) when sold separately in finished form, and B is the average gross selling price in the applicable country of the other active ingredient(s) or product(s) included in the Combination Product when sold separately in finished form, in each case for the most recent period in which sales of both occurred. If the Product(s) is/are sold as part of a Combination Product and is/are sold separately in finished form, but the other product(s) included in the Combination Product are not sold separately in finished form, the Net Sales of the Product shall be determined by multiplying the Net Sales of the Combination Product by the fraction A/C , where: A is the average gross selling price in the applicable country of the Product(s) contained in such Combination Product when sold separately, and C is the average gross selling price in the applicable country of the Combination Product. If the Product(s)

is/are sold as part of a Combination Product and is/are not sold separately in finished form, but the other product(s) included in the Combination Product are sold separately in finished form, the Net Sales of the Product shall be determined by multiplying the Net Sales of the Combination Product by the fraction C-B/C, where: B is the average sale price of the other product(s) included in such Combination Product when sold separately, and C is the average sale price of the Combination Product. If, on a country-by-country basis, the Product component is not sold separately in that country, Net Sales for the Combination Product shall be calculated by multiplying actual Net Sales of the Combination Product by the fraction D/(D+E), where D is the fair market value of the portion of the Combination Product that contains the Product and E is the fair market value of the portion of the Combination Product containing the other active ingredient(s) included in such Combination Product, as such fair market values are determined by mutual agreement of the Parties through the JSC.

The foregoing analysis shall be conducted on a country-by-country basis as reasonably required to determine relative fair market values of the relevant Combination Product components.

“Party” means ABUS, Protiva or Gritstone, and “Parties” means ABUS, Protiva and Gritstone.

“Patent” means any patent (including any reissue, extension, substitution, confirmation, re-registrations, re-examination, revival, supplementary protection certificate, patents of addition, continuation, continuation-in-part, or divisional) or patent application (including any provisional application, non-provisional patent application, continuation, continuation-in-part, divisional, PCT international applications or national phase applications), in each case whether in the U.S. or any foreign country.

“Payload(s)” means the material, other than the LNP(s), contained in the Product, which material includes srRNA that encodes [***] TSNA.

“Payload IP” means Intellectual Property directed solely to Payload(s).

“Payload Material” has the meaning set forth in Section 3.3(f).

“Permitted Contractor” means a Third Party (e.g., a contractor or consultant) that performs the activities for which Gritstone is responsible under this Agreement under a *bona fide* contract services arrangement; *provided, however*, that [***].

“Person” means an individual, corporation, limited liability company, syndicate, association, trust, partnership, joint venture, unincorporated organization, government agency or any agency, instrumentality or political subdivision thereof, or other entity.

“Phase I Study” means human clinical studies of a Product conducted under the same or substantially similar protocol or IND, as each may be amended or supplemented, in any country, the primary purpose of which is the determination of first in human safety and, if possible, to gain early evidence on effectiveness, as described in U.S. 21 C.F.R. 312.21(a).

“Phase III Study” means pivotal human clinical studies of a Product in any country (i) conducted under the same or substantially similar protocol or IND, as each may be amended or supplemented, in any country that would satisfy the requirements of U.S. 21 C.F.R. Part 312.21(c) and is intended to evaluate the benefit-risk relationship of such Product is a defined patient population that provides an adequate basis of data to support a Marketing Authorization Approval or (ii) a clinical trial that Gritstone or its Affiliate refers to publicly in a press release issued, or a filing with the Securities and Exchange Commission by Gritstone or its Affiliate, as a “Phase III Study”.

“Prime” means the initial vaccine that precedes the Boost vaccine.

“Proceeds” has the meaning set forth in Section 6.3(d).

“Product” means a product containing [***] RNA that encodes [***] TSNA and that is formulated in an Arbutus LNP [***]; *provided* that such RNA is part of a Self-Replicating RNA System is not a non-replicating messenger RNA (“mRNA”).

“Product IP” means (a) all Product Patents and (b) all Know-How and trade secrets specific to a Payload.

“Product Patents” means all Patents wherein all claims include a limitation to a Payload.

“Protiva” has the meaning set forth in the introductory paragraph.

“Receiving Party” means the Party that receives Confidential Information of the other Party.

“Record Retention Period” has the meaning set forth in Section 4.6(b).

“Regulatory Authority” means any federal, national, multinational, state, provincial or local regulatory agency, department, bureau or other governmental entity anywhere in the world with authority over the Development, Manufacture or Commercialization of a Product under this Agreement. The term “Regulatory Authority” includes the FDA, the EMA, the European Commission and relevant national competent authorities in the EU member states.

“Research” or “Researching” means identifying, evaluating, validating and optimizing products prior to pre-IND GLP toxicology studies.

“Research Plan” has the meaning set forth in Section 3.2.

“RNA” means ribonucleic acid, and includes, for clarity, mRNA.

“Royalty” has the meaning set forth in Section 4.4.

“Royalty Payment Term” means, on a Product-by-Product and a country-by-country basis, the term beginning on the First Commercial Sale of the applicable Product in such country and ending on the date of the last to expire Valid Claim that exists in such country that would be infringed by the making, using, offering for sale or selling of such Product in such country absent the license grant in this Agreement.

“Self-Replicating RNA System” or “srRNA” means an RNA system encoding [***].

“Solvent Party” has the meaning set forth in Section 9.6.

“Sublicensee” means a Third Party to whom Gritstone has granted a sublicense under Section 2.2.

“Term” means the term described in Section 9.1.

“Territory” means worldwide.

“Third Party” means any Person other than Arbutus, Gritstone or any of their respective Affiliates.

“Third Party Claim” has the meaning set forth in Section 8.3.

“Tumor-Specific Neoantigen(s)” or “TSNA” means peptide sequence(s) arising from gene mutations occurring specifically in tumor cells that are presented, or predicted to be presented, to the immune system on the surface of tumor cells in association with human leukocyte antigens (HLA).

“UBC Agreement” means that certain License Agreement by and between Arbutus (or its direct or indirect predecessor) and the University of British Columbia dated July 1, 1998, as amended July 11, 2006 and January 8, 2007.

“Valid Claim” means a claim of an issued and unexpired Arbutus Patent or Joint Patent, which claim has not been revoked or held unenforceable, unpatentable or invalid by a decision of a court or other governmental agency of competent jurisdiction, which is not appealable or has not been appealed within the time allowed for appeal, and which has not been abandoned, disclaimed, denied, or admitted to be invalid or unenforceable through reissue, re-examination or disclaimer or otherwise.

1.2 Interpretation.

(a) Words such as “herein,” “hereinafter,” “hereof” and “hereunder” refer to this Agreement as a whole and not merely to a section, paragraph or clause in which such words appear, unless the context otherwise requires. Enumerative references to sections, paragraphs or clauses, or exhibits, without reference to an explicit agreement, document or exhibit, refer to this Agreement or exhibits attached to this Agreement, as applicable. The singular shall include the plural, and each masculine, feminine and neuter reference shall include and refer also to the others, unless the context otherwise requires. The words “include,” “includes” and “including” are deemed to be followed by “without limitation” or words of similar import. Except where the context otherwise requires, the word “or” is used in the inclusive sense (and/or). All dollar amounts are expressed in U.S. dollars.

(b) This Agreement is between financially sophisticated and knowledgeable parties and is entered into by the Parties in reliance upon the economic and legal bargains contained herein. The language used in this Agreement has been negotiated by the Parties and shall be interpreted and construed in a fair and impartial manner without regard to such factors as the Party that prepared, or caused the preparation of, this Agreement or the relative bargaining power of the Parties.

ARTICLE II - LICENSE GRANTS AND RELATED RIGHTS

2.1 License Grant to Gritstone. Subject to the terms and conditions in this Agreement, Arbutus hereby grants to Gritstone, and Gritstone hereby accepts, an exclusive (even as to Arbutus), sublicensable (subject to Section 2.2), transferable (subject to Section 10.4) right and license under Licensed Intellectual Property to Research, Develop, Manufacture and Commercialize Products for use in the Field in the Territory. The foregoing license is subject to any non-exclusive licenses granted by Arbutus prior to the Effective Date that are expressly set forth in Exhibit E.

2.2 Sublicensing. Gritstone may grant sublicenses under Arbutus Patents licensed under Section 2.1 (with the right to sublicense through multiple tiers only as set forth in this Section 2.2); provided, however, that, in the case of sublicenses granted to Affiliates and Third Parties:

- (a) Gritstone and its Affiliates shall not grant a sublicense (and no Sublicensee shall grant a sub-sublicense) to [***];
- (b) Gritstone and its Affiliates shall not grant a sublicense (and no Sublicensee shall grant a sub-sublicense) to [***];

(c) in the case of Third Party Sublicensees, each sublicense and sub-sublicense is in writing and on terms consistent with, and subject to, the terms of this Agreement and is granted to [***];

(d) upon termination of this Agreement, any sublicenses shall convert into a direct license from Arbutus under the terms of this Agreement; *provided* that the Sublicensee (i) is not then in breach of the sublicense agreement, (ii) agrees in writing to be bound to Arbutus as a licensee under the terms and conditions of this Agreement, and (iii) agrees in writing that in no event shall Arbutus assume any obligations or liability, or be under any obligation or requirement of performance that extends beyond Arbutus' obligations and liabilities under this Agreement;

(e) in the case of Third Party Sublicensees, Gritstone promptly provides Arbutus with a copy of the executed sublicense within [***] days following its execution or in the case of a sub-sublicense, within [***] days following Gritstone's receipt thereof, with such reasonable redaction as Gritstone or its Sublicensee may make; *provided* that such redactions do not include provisions necessary to demonstrate compliance with the requirements of this Agreement; and

(f) the grant of such sublicense shall not relieve Gritstone of its obligations under this Agreement, and Gritstone shall be responsible for any and all obligations of such Sublicensee as if such Sublicensee were "Gritstone" hereunder.

2.3 Retained Rights. Arbutus expressly retains all right, title and interest not expressly granted to Gritstone under this Article II (or otherwise under this Agreement), including, for the avoidance of doubt, (i) all rights with respect to its LNP Technology and Licensed Intellectual Property for use outside of the Field and (ii) all rights within the Field for the purpose of performing its obligations under this Agreement. Notwithstanding anything to the contrary contained herein, Arbutus is not granting to Gritstone a license, under Licensed Intellectual Property, to Research, Develop, Manufacture or otherwise improve upon the Arbutus LNPs that are not used in Products; *provided*, that the foregoing does not restrict Gritstone from conducting any such activities so long as it does not infringe any Arbutus Patents or use any Arbutus Confidential Information.

2.4 Rights in Bankruptcy. All licenses and rights to licenses granted under or pursuant to this Agreement by Arbutus to Gritstone are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the United States Bankruptcy Code (the "Code"), licenses of rights to "intellectual property" as defined under Section 101(35A) of the Code. Gritstone, as a licensee of such rights under this Agreement, shall retain and may fully exercise all of its rights and elections under the Code and, upon commencement of a bankruptcy proceeding by or against Arbutus (or any Affiliate of Arbutus that owns or Controls Licensed Intellectual Property) under the Code, Gritstone shall be entitled to a complete duplicate of, or complete access to (as Gritstone deems appropriate), any such Licensed Intellectual Property and all embodiments of such Licensed Intellectual Property.

2.5 Contractors. Notwithstanding Sections 2.1 and 2.2, Gritstone may utilize Permitted Contractors to perform its obligations in accordance with this Agreement; *provided* that Gritstone shall not share Arbutus' Confidential Information with any Permitted Contractor unless Gritstone and its Permitted Contractor shall have executed a binding agreement which contains obligations of confidentiality, non-use, and invention assignment consistent with and at least as protective of Arbutus' rights as the provisions of this Agreement.

2.6 Cross License. During the Term, (a) Arbutus shall grant to Gritstone a royalty-free, non-exclusive research license under Licensed Intellectual Property as necessary for Gritstone to conduct the work described in the Research Plan and (b) Gritstone shall grant to Arbutus a royalty-free, non-exclusive research license under Gritstone IP as necessary for Arbutus to conduct the work described in the Research Plan.

ARTICLE III - SCOPE OF COLLABORATION

3.1 Joint Steering Committee.

(a) The Parties hereby establish a joint steering committee (the "JSC"), consisting of an equal number of members appointed by each Party, which number of members shall not exceed two (2) from each Party, to oversee the conduct of activities under the Research Plan and make any amendments thereof, subject to the terms set forth herein. Each member of the JSC shall have the appropriate expertise to oversee the Parties' performance of their respective obligations under this Agreement. The initial JSC members shall be designated by each Party within [***] days after the Effective Date. Each Party shall have the right, at any time and from time to time, to designate a replacement, on a permanent or temporary basis, for any or all of its previously designated members of the JSC. Ad hoc guests who are bound by obligations of confidentiality and restrictions on use of such Confidential Information that are no less restrictive than the obligations in Article 7 may be invited to the JSC meetings.

(b) The JSC shall meet [***] (or more frequently as the Parties may agree) on such dates and at such times as the Parties may agree; *provided, however*, that the first meeting of the JSC must occur within [***] of the Effective Date. The Parties shall agree in advance on a written agenda for each meeting of the JSC. The regularly scheduled JSC meetings shall take place in person or telephonically as determined by the Parties, but shall include [***]. The members of the JSC may also convene or be polled or consulted from time to time by means of telephone conference, video conference, electronic mail or correspondence and the like, as the Parties deem necessary. Minutes of any meeting of the JSC shall be promptly issued to the Parties following each meeting, and the Parties shall use Commercially Reasonable Efforts to agree as to the specific text of such minutes within [***] days of issuance.

(c) JSC Disputes.

(i) Within the JSC. All decisions within the JSC shall be made by consensus. If the JSC is unable to reach consensus on any issue for which it is responsible, within [***] days after a Party affirmatively states that a decision needs to be made, either Party may elect to submit such issue first to the Parties' Alliance Managers and, if still unresolved, to the Parties' Executive Officers, in accordance with subsection (ii) below.

(ii) Referral to Alliance Managers; Executive Officers. If a Party makes an election under subsection (i) to refer a matter to the Alliance Managers, the JSC shall submit in writing the respective positions of the Parties to their respective Alliance Managers. Such Alliance Managers shall use good faith efforts to promptly resolve such matter. If the Alliance Managers are unable to reach consensus on any such matter within [***] days after its submission to them, such matter shall be escalated to the Parties' Executive Officers. Each Party's Alliance Manager shall submit in writing the position of the Party it represents to the Executive Officer of such Party. The Executive Officers shall use good faith efforts to promptly resolve such matter within [***] days after the Alliance Managers' submission of such matter to them. If the Executive Officers are unable to reach consensus on any such matter within [***] days after its submission to them, the matter shall be decided by [***]; *provided* that no decision by [***] on such matters may require [***] to [***]. For clarity, such limitation on [***] decision-making authority shall not restrict the control of the timing of commencing, or sequencing, of any research or formulation development activities nor the reduction or increases of any FTEs working on such activities (in accordance with the Research Plan).

(d) Each Party shall be responsible for the costs of its representatives on the JSC, including all travel and related costs and expenses for its members and approved invitees to attend meetings of, and otherwise participate on, the JSC.

(e) Notwithstanding anything to the contrary herein, neither the JSC nor any member of the JSC, in such capacity shall be empowered to change or waive the terms or conditions of this Agreement.

(f) Each Party shall appoint an individual (from the Party or from an Affiliate of such Party) to act as the first point of contact between the Parties with regard to questions relating to this Agreement or the overall relationship between the Parties (each an "Alliance Manager" and collectively the "Alliance Managers"). The Alliance Managers will: (i) use good faith efforts to attend all meetings of the JSC; and (ii) facilitate the resolution of any issue on which the JSC is unable to reach consensus, in accordance with Section 3.1(c).

3.2 Research Plan. The Parties shall prepare a Research Plan (the "Research Plan") that describes: (a) the activities to be undertaken during the Term; (b) the Party(ies) responsible for each activity; (c) the deliverables; and (d) a timeline. An initial copy of the Research Plan is

attached hereto as Exhibit B. The Parties may amend the Research Plan from time to time, provided that any material amendment to the Research Plan shall require the written approval of both of the Parties. Both Arbutus and Gritstone shall undertake research studies as set forth in the Research Plan.

3.3 Development Responsibilities.

(a) Both Arbutus and Gritstone shall undertake preclinical studies and manufacturing process development work as set forth in the Research Plan. Each Party shall share with the other Party the results of the studies undertaken in accordance with the Research Plan.

(b) Throughout the Term Gritstone shall be responsible, at its sole expense, for [***].

(c) Subject to the Research Plan Arbutus shall:

(i) be responsible for Manufacture of formulated material [***];

(ii) [***];

(iii) [***];

(iv) [***];

(v) [***];

(vi) [***];

(vii) [***]; and

(viii) [***].

(d) During the performance of the Research Plan, Gritstone shall reimburse Arbutus for: (i) any materials utilized during the Manufacture of any Products at cost plus [***] percent ([***]%), (ii) time spent by personnel working on Research Plan activities at the FTE Rate and (iii) all preapproved reasonable out-of-pocket expenses.

(e) Within [***] days after each Calendar Quarter, Arbutus shall provide Gritstone with an invoice of reimbursable costs incurred while executing the Research Plan during such Calendar Quarter and Gritstone shall pay to Arbutus the invoiced amounts within [***] days of receipt thereof.

(f) Arbutus shall not, and shall cause its Affiliates to not, (i) use any Payload material provided by or on behalf of Gritstone, including any information or data generated by either Party relating thereto, (“Payload Material”) for any activity other than as set forth in this Agreement, including in the Research Plan; (ii) transfer any Payload Material to any Person without Gritstone’s prior written consent; or (iii) modify, analyze, deconstruct or reverse engineer any Payload Material to determine the structure, sequence or composition of such Payload Material (including to develop any Know How or other Intellectual Property directed to or otherwise pertaining to any Payload Material, including the chemical modification of any Payload Material embodied by such Payload Material or details of any [***] any Payload Material).

(g) Any and all data, results, and other information generated in the performance of the Research Plan shall be Confidential Information of each of the Parties and subject to Article 7. Notwithstanding anything to the contrary in the foregoing, Gritstone is and shall at all times remain the sole and exclusive owner of all data, results and other information generated in the performance of the Research Plan by either Party to the extent such data, results, and other information relates to a Product, including any modifications to any [***] made by or on behalf of Gritstone in order to Manufacture Product(s), and such data, results and other information shall be Confidential Information of Gritstone for purposes of Article 7.

3.4 Technology Transfer.

(a) At the request of Gritstone, but in any event no later than [***] or such other date as mutually agreed to by the Parties, Arbutus shall transfer all Manufacturing Know-How to Gritstone or a Third Party CMO designated by Gritstone and support Gritstone in the establishment and validation of an alternative facility for the Manufacture of the Product (the “Manufacturing Facility”) and in particular, Arbutus shall:

(i) transfer to Gritstone or such CMO all tangible embodiments of all Manufacturing Know-How;

(ii) provide Gritstone or such CMO technical assistance to implement the processes for the Manufacture of the Product, including the procurement and installation of any process and analytical equipment and, at the request of Gritstone, provide additional documentation, telephone or on-site visits; *provided, however,* that Gritstone shall reimburse Arbutus for all travel expenses reasonably incurred at the request of Gritstone; and

(iii) at the request of Gritstone, provide such on-site technical assistance necessary for the installation, startup and validation of the Manufacturing Facility and Manufacture of Product.

(b) Gritstone shall reimburse Arbutus for all preapproved travel expenses reasonably incurred at the request of Gritstone and for all such assistance under Section 3.4(a).

(c) Once the technical transfer is complete pursuant to this Section 3.4, Gritstone shall assume all responsibilities for future Manufacturing of Products and Arbutus shall provide ongoing technical support [***]. Such technical transfer shall not be deemed to be complete until, without limiting the performance of any other activities in connection with such technical transfer, at least [***] successful (i.e., the manufactured Product meets the applicable specifications therefor) manufacturing runs have been conducted on [***] different occasions.

3.5 Manufacturing and Supply. Arbutus will (a) be responsible for the Manufacture of Products for [***], (b) provide associated manufacturing and analytical documentation, (c) be responsible for [***] in not later than [***] (*provided that Gritstone will be responsible for the [***]*), and (d) transfer, not later than [***], the [***], which will be determined by Gritstone. After successful transfer of the LNP formulation to Gritstone and/or Gritstone's CMO, Gritstone will assume responsibilities for future manufacturing of Products; *provided that Arbutus will provide ongoing technical support if requested by Gritstone.*

ARTICLE IV - FINANCIAL PROVISIONS

4.1 Upfront Payment. On or before the [***] day following the date of an invoice issued on or after the Effective Date, Gritstone shall make a one-time fully-earned, non-refundable and non-creditable payment to Arbutus in the amount of US \$5,000,000 as partial consideration for the rights granted under this Agreement.

4.2 Development Milestone Payments.

(a) Subject to the terms and conditions of this Agreement (including subsection (b) below), in consideration of the grant of the license in Section 2.1, Gritstone shall pay to Arbutus the one-time Development Milestone Payments upon achievement of the corresponding development milestones (as set forth in the table in this Section 4.2(a), below, each a "Development Milestone"). Gritstone shall provide written notice to Arbutus of the occurrence of each Development Milestone within [***] Business Days of its occurrence, and pay the indicated Development Milestone payment amount (each a "Development Milestone Payment") to Arbutus within [***] days after receipt of an invoice from Arbutus following the occurrence of the applicable Development Milestone as follows:

<u>Development Milestone</u>	<u>Development Milestone Payment</u>
Acceptance of first IND or equivalent	US \$2,500,000
[***]	US \$[***]
[***]	US \$[***]
[***]	US \$[***]
[***]	US \$[***]
[***]	US \$[***]
[***]	US \$[***]
[***]	US \$[***]
[***]	US \$[***]
[***]	US \$[***]
[***]	US \$[***]
[***]	US \$[***]
[***]	US \$[***]
[***]	US \$[***]
[***]	US \$[***]
[***]	US \$[***]
[***]	US \$[***]
[***]	US \$[***]
[***]	US \$[***]

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(b) For clarity, (i) any Marketing Authorization Approval that is obtained for [***] for which the First Marketing Authorization Approval milestone payment has been previously paid shall not be deemed to be a second or third Marketing Authorization Approval for purposes of this milestone payment section and (ii) any clinical trial required to be conducted by a Regulatory Authority after the conduct of the first Phase III Trial for a Product in order to obtain Marketing Authorization Approval for such Product shall not constitute Initiation of dosing of Second Phase III Study or Initiation of dosing of Third Phase III Study.

4.3 Commercial Milestone Payments.

(a) Subject to the terms and conditions of this Agreement, in further consideration of the licenses and rights granted to Gritstone hereunder, upon first achievement by Gritstone, its Affiliates and/or Sublicensees of each of the commercialization milestones for Products set forth below (each, a "Commercial Milestone"), the corresponding one-time, non-refundable and non-creditable Commercial Milestone payment amounts (each, a "Commercial Milestone Payment") shall be payable by Gritstone to Arbutus as follows:

	<u>Commercial Milestone</u>	<u>Commercial Milestone Payment</u>
[***]		US \$[***]
[***]		US \$[***]
[***]		US \$[***]

(b) Each Commercial Milestone Payment shall be due to Arbutus solely as of the first achievement by Gritstone, its Affiliates and/or Sublicensees of the corresponding Commercial Milestone. For the avoidance of doubt (i) each Commercial Milestone Payment shall be payable only on the first occurrence of the Commercial Milestone, (ii) none of the Commercial Milestone Payments shall be payable more than once regardless of how many times such Commercial Milestone is achieved, and (iii) the total amount of payments due under Sections 4.2 and 4.3 shall not exceed US\$123,500,000.

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

4.4 Royalty Payments. In consideration of the grant of the license in Section 2.1, Gritstone shall pay to Arbutus the following royalty on a Product-by-Product and country-by-country basis during the Royalty Payment Term for each Product in each country (the “Royalty”):

(a) Gritstone shall pay to Arbutus an amount equal to [***] percent ([***]%) of Net Sales of any Product to the extent it is used in a Heterologous System; and

(b) Gritstone shall pay to Arbutus an amount equal to [***] percent ([***]%) of Net Sales of any Product to the extent it is used in a Homologous System.

(c) Following expiry of the Royalty Payment Term in respect of any Product or country (i) the licenses granted to Gritstone with respect to such Product and country become fully paid-up, sublicensable (subject to Section 2.2), royalty-free, exclusive, transferable, perpetual and irrevocable licenses and (ii) the obligation of Gritstone to pay any Royalties or Commercial Milestones with respect to sales of Products in such country shall terminate. Without the limiting the definition of the Royalty Payment Term, it shall be deemed to expire upon the expiration of all Valid Claims of Patents within the Licensed Intellectual Property that exist in such country and Cover the composition of matter or a method of use of such Product.

4.5 Royalty Reductions. The Royalties due and payable under Section 4.4 shall be reduced, on a country-by-country and Product by-Product basis, by an amount equal to [***] percent ([***]%) of any royalty payments made by Gritstone to Third Parties for Necessary Third Party IP; *provided* that in no event will the royalty payable by Gritstone to Arbutus be less than [***] percent ([***]%) of the royalties otherwise due; *provided further* that any amounts which may not be deducted pursuant to the preceding proviso may be carried forward and deducted in further payment periods, subject to the floor set forth in the preceding proviso.

4.6 Royalty Reports; Expense Reports; Records and Audits.

(a) Within [***] days after the end of each [***] during the Royalty Payment Term, Gritstone shall provide to Arbutus a written report on a Product-by-Product and country-by-country basis (in electronic form) that includes, for each [***], (i) the gross invoiced sales and the Net Sales of all Products, and (ii) the calculated amount of the Royalty owed by Gritstone to Arbutus in respect of the sale of such Products.

(b) Until the [***] anniversary of the date any book or record is created or such longer period required by Applicable Laws (the “Record Retention Period”), Gritstone shall maintain and retain complete and accurate books of account and records covering all transactions relating to payment of amounts that may be due under this Article IV. Upon the reasonable

advance notice of Arbutus (of at least [***] days), Gritstone shall make such books and records available for inspection and audit by Arbutus' authorized representative (which shall be a national certified public accounting firm designated by Arbutus and reasonably acceptable to Gritstone), subject to reasonable precautions to protect the Confidential Information of Gritstone. Such examinations may not be conducted more than [***] and going back only during the Record Retention Period after receipt of the respective invoice and report. All audits must be conducted during normal business hours of Gritstone and conducted in a manner so as to minimize the impact on the normal operations of Gritstone. The accounting firm conducting any such audit must provide a report of its findings of any such audit to both Parties, may only identify in such report whether the amount of Royalties paid was correct and the actual amount of Royalties payable and may not disclose any other Confidential Information of Gritstone. The auditor's report and all other information disclosed to the auditor or generated by the auditor in such audit shall be the Confidential Information of Gritstone. Arbutus shall pay the cost of such audits unless it discovers that Gritstone has underreported aggregate Royalties during the applicable examination period by an amount equal to or greater than [***] percent ([***]%), in which case the costs of such audit shall be borne by Gritstone. If an audit reveals an underpayment or overpayment, the Party responsible for making payment shall promptly pay to the other Party the amount of the underpayment or overpayment discovered unpaid under this Section 4.6(b), subject to Section 4.7(d).

4.7 Payment Procedure.

(a) Remittance of payments under this Article IV shall be made by means of wire transfer of immediately available funds to a bank account designated in advance in writing by Arbutus. All amounts payable to Arbutus under this Agreement shall be paid in United States dollars. With respect to Net Sales in a currency other than U.S. dollars, the Net Sales shall be converted to U.S. dollars using Gritstone's then current internal foreign currency translation methodology actually used on a consistent basis in preparing its audited financial statements.

(b) Any Development Milestone Payment or Commercial Milestone Payment owed pursuant to Section 4.2 or 4.3 shall be paid by Gritstone to Arbutus within [***] days (or, in the case of Commercial Milestones, [***] days) after the occurrence of the event triggering the payment of such Milestone Payment.

(c) Any Royalty shall accrue in accordance with Section 4.4 during the applicable Royalty Payment Term. Royalty obligations that accrue during a [***] shall be paid within [***] days after the end of such [***].

(d) Any payments due from one Party to the other Party under this Article IV that are not paid within [***] days after the date such payments are due (and not being disputed in good faith) shall bear interest from the date such unpaid payments are due until paid in full at the lesser of: (i) [***] percent ([***]%) above the prime rate quoted by the Wall Street Journal

(U.S., Eastern Edition) in effect on the date that such payment would have been first due, and (ii) the highest amount of interest permitted by Applicable Laws. The foregoing interest shall be in addition to any other remedies that either Party may have pursuant to this Agreement.

4.8 Taxes. Gritstone may deduct or withhold from any payments due to Arbutus amounts for payment of any withholding taxes that are required by law to be paid to any Governmental Authority with respect to such payments. Gritstone will give proper evidence from time to time as to the payment of any such tax. Gritstone is responsible for paying any local, state or federal taxes, levies or duties assessable by tax authorities in the applicable jurisdiction, excluding only taxes based on Arbutus' net income. Arbutus will provide Gritstone all necessary documents and correspondence, and will also use reasonable efforts to provide to Gritstone any other cooperation or assistance on a reasonable basis as may be necessary to enable Gritstone to claim exemption from such deduction or withholding taxes. The Parties will cooperate with each other in seeking relief or reduction in the deduction or withholding of any tax under any double taxation or other similar treaty or agreement from time to time in force and in seeking to receive a refund of any withholding tax or to claim a foreign tax credit.

ARTICLE V - ADDITIONAL OBLIGATIONS

5.1 Obligations of Gritstone. Gritstone shall use Commercially Reasonable Efforts to Develop and Commercialize the Product(s) in the Territory.

5.2 Obligations of Arbutus. Arbutus shall provide to Gritstone relevant CMC information, non-clinical and clinical data, and non-clinical and clinical documentation in support of Marketing Authorization Approvals and applications therefor or to support responses to requests from or inquiries of Regulatory Authorities, including INDs, biologics license applications and other regulatory filings, investigational brochures, and research reports related thereto. Arbutus will also provide to Gritstone in a timely fashion, any pertinent materials and/or support required in response to Regulatory Authority requests.

5.3 Ownership of Approvals, INDs and Registration Filings. Gritstone shall be responsible for, and shall have the decision-making authority in respect of, preparing, determining final content, prosecuting and maintaining in its name INDs and any Marketing Authorization Approvals for Products in the Field under this Agreement. Gritstone shall own, in their entirety, (a) all non-clinical and clinical data and reports related to any Product, including those arising from clinical trials conducted for any Product, and (b) all Marketing Authorization Approvals and applications therefor, including INDs, biologics license applications and other regulatory filings, related thereto.

5.4 Regulatory Authority Communications. Gritstone shall be solely responsible for initiating and responding to any communications related to any Product from any Regulatory Authority, including meetings with any Regulatory Authorities, at its sole cost and expense. Arbutus shall provide any assistance reasonably requested by Gritstone in connection with the foregoing activities.

5.5 Compliance with Law; Further Assurances. Both Arbutus and Gritstone, and their respective Affiliates, shall perform their respective obligations under this Agreement in compliance with Applicable Laws. The Parties shall cooperate with each other to provide all reasonable assistance and take all actions that are necessary to comply with any Applicable Laws in connection with their respective Regulatory Authority obligations in relation to a Product under this Agreement. In addition, the Parties shall work together in good faith to develop such necessary regulatory strategies which may be required for purposes of this Agreement.

5.6 Regulatory Authority Inspections. If a Regulatory Authority desires to conduct an inspection or audit of any facility in which any Development or Manufacturing activities are being carried out under this Agreement by or on behalf of Arbutus or any data generated in the conduct of activities under this Agreement by or on behalf of Arbutus, then (a) the Party receiving notice of such inspection or audit shall promptly notify the other Party of such inspection or audit, and (b) Arbutus shall (i) cooperate with such Regulatory Authority during such inspection or audit, (ii) immediately update Gritstone during (in the case of multi-day inspections or audits) and following such inspection or audit of any information relating to Products, (iii) promptly provide to Gritstone the inspection or audit observations of such Regulatory Authority relating to such activities or data; *provided* that Arbutus shall have the right to redact any material from such inspection or audit observations that do not relate to the Products, (iv) prepare the response to any such observations, (v) provide a copy of such planned response to Gritstone to the extent it relates to the Product, shall consult with Gritstone concerning the response of Arbutus to each such communication and, if such response affects the Product specifications or any Marketing Authorization Approval (or Gritstone's obligations to comply with any legal requirements), such response shall be subject to Gritstone's approval, and (vi) conform its activities under this Agreement to any commitments made in such a response. To the extent reasonably practicable and not otherwise prohibited by Applicable Laws, Arbutus shall permit Gritstone the opportunity to be present on-site during (but not directly participate in) any such inspection.

ARTICLE VI - INTELLECTUAL PROPERTY

6.1 Ownership.

(a) Subject to the licenses granted by Arbutus herein and Section 6.1(d) in this Agreement, Arbutus is and shall at all times remain the sole and exclusive owner, regardless of inventorship, of all:

- (i) Arbutus Background IP,
- (ii) Arbutus' Confidential Information,

(iii) Intellectual Property that (A) [***] (collectively, the “Arbutus Improvement IP”), and

(iv) Know-How Controlled by Arbutus or its Affiliates as of the Effective Date or during the Term that is directed to any aspect of LNPs, including [***], but not the Payload IP, made in the performance of activities conducted under this Agreement [***].

(b) Notwithstanding the foregoing, (i) Arbutus Improvement IP does not include the Product IP or Payload IP or any improvements to the Gritstone Background IP, and (ii) in no event shall Arbutus seek a Patent that includes claims directed to Product IP or Payload IP or any improvements to the Gritstone Background IP. For the purpose of clarity, in no event shall Arbutus seek a patent including claims to Gritstone IP. Gritstone shall, and shall cause its Affiliates to, execute and deliver such additional documents, instruments, conveyances, and assurances and take such further actions as may be reasonably required to ensure that all right, title, and interest in the Arbutus Improvement IP is effectively transferred to and held by Arbutus.

(c) Subject to the licenses granted by Gritstone in this Agreement, Gritstone is and shall at all times remain the sole and exclusive owner, regardless of inventorship, of (i) all Gritstone Background IP, (ii) Gritstone’s Confidential Information, including Payload Material, (iii) all data, results, and other Intellectual Property generated, created, conceived or reduced to practice [***] in the performance of activities conducted under this Agreement, (A) that is an improvement, enhancement or derivative of Gritstone Background IP, including any Payload IP, and is not an improvement, enhancement or derivative of any Arbutus Background IP, and/or (B) that relates to [***], and (iv) all Product IP and Payload IP (collectively “Gritstone IP”). For the purpose of clarity, in no event shall Gritstone seek a patent including claims to Arbutus Improvement IP. Arbutus shall, and shall cause its Affiliates to, execute and deliver such additional documents, instruments, conveyances and assurances and take such further actions as may be reasonably required to ensure that all right, title, and interest in the Gritstone IP is effectively transferred to and held by Gritstone.

(d) Except as set forth in Section 6.1(a) - (c) above:

(i) inventorship of Intellectual Property conceived, reduced to practice or otherwise created in the performance of activities conducted under this Agreement shall be determined by the inventorship laws of the United States; and

(ii) all data, results and inventions generated, conceived, reduced to practice or otherwise created solely by employees, consultants, or contractors of Arbutus in the performance of activities conducted under this Agreement shall be owned by Arbutus (the “Arbutus Sole IP”).

(iii) all data, results and inventions generated, conceived, reduced to practice or otherwise created solely by employees or Permitted Contractor of Gritstone in the performance of activities conducted under this Agreement shall be owned by Gritstone (the "Gritstone Sole IP"); and

(iv) all data, results and inventions generated, conceived, reduced to practice or otherwise created jointly by employees, consultants, or contractors of Arbutus and by employees or Permitted Contractors of Gritstone in the performance of activities conducted under the Research Plan shall be owned jointly by the Parties ("Joint IP"); provided that Arbutus hereby grants to Gritstone, and Gritstone hereby accepts, an exclusive (even as to Arbutus), sublicensable, right and license under Arbutus' right in any Joint IP to Research, Develop, Manufacture and Commercialize any and all cancer vaccines [***] for any use in the Territory, within the Field.

(e) Each Party shall have an undivided interest in Joint IP, which may be sublicensed to Third Parties, and any ownership rights therein may be transferred, in whole or in part, by each Party (unless otherwise prohibited by this Agreement and subject to any licenses thereunder granted under this Agreement); provided, however, that (i) each Party agrees not to transfer any of its ownership interest in any of the Joint IP without securing the transferee's written agreement to be bound by the terms of this Section 6.1(e) and (ii) nothing in this Article VI shall relieve a Party or its Affiliates of their obligations under Article VII with respect to Confidential Information of any Party provided by the other Party or such other Party's Affiliates. Neither Party hereto shall have the duty to account to the other Party for any revenues or profits obtained from any transfer of its interest in, or its use, sublicense or other exploitation of, the Joint IP outside the scope of this Agreement. The provisions governing Joint IP set forth in this Section 6.1(e) shall survive the expiration or termination of this Agreement. To the extent necessary to effect the intent of this Section 6.1(e), each Party grants to the other Party a nonexclusive, royalty-free, worldwide, sublicensable license under such Party's interest in Joint IP, and all intellectual property rights therein, to make, use, sell, offer for sale and import the relevant Joint IP, for all purposes, subject to the license and rights granted under this Agreement.

(f) Except as otherwise expressly provided in this Agreement, under no circumstances shall a Party, as a result of this Agreement, obtain any ownership interest or other right, title or interest in or to any other Intellectual Property or Confidential Information of the other Party, whether by implication, estoppel or otherwise, including any items Controlled or developed by the other Party, or delivered by the other Party, at any time pursuant to this Agreement.

(g) The Parties agree that this Agreement constitutes a joint research agreement for purposes of 35 U.S.C. §102(c).

6.2 Prosecution and Maintenance of Patents.

(a) Arbutus shall have the sole right and responsibility, in its sole discretion and at its sole cost and expense, to file, prosecute, maintain or abandon patent protection in the Territory for Arbutus Patents, post-grant review and similar proceedings. Arbutus shall notify Gritstone of all material developments and all significant actions to be taken in connection with prosecuting and maintaining the Arbutus Patents that Cover any Product and provide Gritstone with copies of all material filings or responses to be made to the patent authorities with respect to such Arbutus Patents and all other material submissions and correspondence with any patent authorities regarding such Arbutus Patents in sufficient time to allow for review and comment by Gritstone. Gritstone shall offer its comments or proposals, if any, promptly, and Arbutus shall not unreasonably reject any such comments and proposals.

(b) Gritstone shall have the sole right and responsibility, in its sole discretion and at its sole cost and expense, to file, prosecute, maintain or abandon patent protection in the Territory for any Patent that is part of the Gritstone IP, or Product IP, including patent term extensions and defending opposition, re-examination, post-grant review and similar proceedings.

(c) Subject to Section 6.2(d), [***], by counsel it selects to whom [***] has no reasonable objection, in consultation with [***], shall be responsible for the preparation, filing, prosecution and maintenance of the Patents Covering Joint IP in the countries selected by [***] in consultation with [***]. [***] shall provide [***] with access to all substantive documentation, filings and communications to or from the respective patent offices in the Territory with respect to the Joint Patents at reasonable times and on reasonable notice of at least [***] Business Days. [***] shall confer with and keep [***] reasonably informed regarding the status of such activities.

(d) In the event that [***] desires to abandon, withdraw or otherwise discontinue the maintenance or prosecution of the Joint Patents in the Territory, [***] shall provide reasonable prior written notice to [***] of such intention (which notice shall, in any event, be given no later than [***] days prior to the next deadline for any action that may be taken with respect to such Patents with the applicable patent office) and [***] shall have the right, but not the obligation, to assume, at its expense, responsibility for the prosecution and maintenance thereof.

(e) Except as provided in Section 6.2(d), all out-of-pocket costs and expenses incurred in the preparation, filing, prosecution and maintenance of any Patent that Covers Joint IP in the Territory shall be shared equally by the Parties.

(f) Notwithstanding the foregoing, (i) Arbutus shall not file a patent application that includes any Gritstone IP or Gritstone Sole IP and (ii) Gritstone shall not file a patent application that includes any Arbutus Background IP, Arbutus Improvement IP or Arbutus Sole IP, in each case without the other Party's prior written consent.

6.3 Third-Party Infringement of Arbutus Patents, Joint Patents, and Product Patents.

(a) Each Party shall use reasonable efforts to promptly report in writing to the other Party during the Term any known or suspected commercially relevant infringement by a Third Party of any of the Arbutus Patents, Joint Patents, and/or Product Patents by a Third Party making, using or selling a Product ("Infringement Action") of which such Party becomes aware and provide the other Party with all evidence in its possession supporting or relating to such infringement.

(b) Gritstone shall have the first right to initiate an infringement or other appropriate suit with respect to infringements or suspected infringements of any of the Product Patents and/or Joint Patents by a Third Party making, using or selling a Product, or to take such other actions as Gritstone, in its sole discretion, deems appropriate with respect to such infringements or suspected infringements, all at Gritstone's sole cost and expense, as applicable. Arbutus shall have the first right to initiate an infringement or other appropriate suit with respect to infringements or suspected infringements of any of the Arbutus Patents by a Third Party making, using or selling a Product, or to take such other actions as Arbutus, in its sole discretion, deems appropriate with respect to such infringements or suspected infringements, all at Arbutus' sole cost and expense, as applicable. Each Party shall (i) notify the other Party promptly after initiating any such Infringement Action, (ii) consult closely with such other Party regarding all aspects of such Infringement Action, and (iii) permit such other Party to have an attorney of its own choosing participate in such Infringement Action. If a Party elects not to initiate, pursue or maintain any such Infringement Action, such Party shall provide the other Party with prompt written notice of the same and, thereafter, such other Party shall have the right, but not the obligation, to initiate, pursue or maintain any Infringement Action that such other Party deems appropriate with respect to such infringements or suspected infringements, all at such other Party's sole cost and expense. Thereafter, such other Party shall consult closely with such Party regarding all aspects of such Infringement Action and permit such Party to have an attorney of its own choosing participate in such Infringement Action. Neither Party shall enter into any settlement or compromise in connection with an Infringement Action that would materially eliminate, diminish, or otherwise modify any right, title, or interest of the other Party in any such Patents or that would require any payments, concessions, or otherwise bind such other Party, without such other Party's prior written consent, which consent shall not be unreasonably withheld, delayed or conditioned. If Arbutus elects not to initiate, pursue or maintain any such Infringement Action, Arbutus shall provide Gritstone with prompt written notice of the same and, thereafter, Gritstone shall have the right, but not the obligation, to initiate, pursue or maintain any Infringement Action Gritstone deems appropriate with respect to such infringements or suspected infringements, all at Gritstone's sole cost and expense. Thereafter, Gritstone shall consult closely with Arbutus regarding all aspects of such Infringement Action and permit Arbutus to have an attorney of its own choosing participate in such Infringement Action. Gritstone shall not enter into any settlement or compromise in connection with an Infringement Action that would materially eliminate, diminish, or otherwise modify any right, title, or interest of Arbutus in any Licensed Intellectual Property or that would require any payments, concessions, or otherwise bind Arbutus, without Arbutus' prior written consent, which consent shall not be unreasonably withheld, delayed or conditioned.

(c) Upon the request of the enforcing Party, the other Party shall cooperate with the enforcing Party in any Infringement Action by joining as a party if necessary or required by Applicable Laws.

(d) The Parties shall share in the proceeds from any Infringement Action under Section 6.3(b), including settlements thereof (the "Proceeds"), as follows:

(i) First, for the costs and expenses, including legal fees, that are incurred by either Party as part of, or in preparation for, the Infringement Action,

(ii) The remainder of the Proceeds shall be treated as [***], with [***].

6.4 Defense of Claims Brought by Third Parties. Each Party shall promptly notify the other Party if it becomes aware of any claim that Gritstone's actual use, sale or practice of Product in connection with its exercise of its license under Section 2.1 infringes, misappropriates, or otherwise violates the Intellectual Property rights of any Third Party.

ARTICLE VII - CONFIDENTIAL INFORMATION AND PUBLICITY

7.1 Non-Disclosure of Confidential Information. Each Party agrees that, for itself and its Affiliates, until the [***] anniversary of the termination or expiration of this Agreement, a Receiving Party shall maintain all Confidential Information of the Disclosing Party in strict confidence and shall not disclose Confidential Information to any Third Party without the prior written consent of the Disclosing Party, except for disclosures expressly permitted below. For the avoidance of doubt, (a) Arbutus' Confidential Information includes LNP Technology, Arbutus Patents, Arbutus Improvement IP, and any Joint IP solely directed or relating to LNPs and (b) Gritstone's Confidential Information includes Gritstone IP, any Joint IP solely directed or relating to Products and/or cancer vaccines [***]. Notwithstanding anything to the contrary contained in this Agreement, in no event shall Gritstone disclose any of Arbutus' Confidential Information to any [***], except as provided in Section 7.4.

7.2 Exceptions. The obligations in this Article VII shall not apply with respect to any portion of the Confidential Information that the Receiving Party can show by competent documented proof: (a) was known to the Receiving Party or its Affiliates, without any obligation to keep it confidential or any restriction on its use, prior to disclosure by the Disclosing Party; (b) is subsequently disclosed to the Receiving Party or its Affiliates by a Third Party lawfully in possession thereof and without any obligation to keep it confidential or any restriction on its use; (c) is or otherwise becomes generally available to the public or enters the public domain, either before or after it is disclosed to the Receiving Party, and such public availability is not the result,

directly or indirectly, of any fault of, or improper taking, use or disclosure by, the Receiving Party or its Affiliates or anyone working in concert or participation with the Receiving Party or its Affiliates; or (d) has been independently developed by employees or contractors of the Receiving Party or its Affiliates without the aid, application or use of Confidential Information of the Disclosing Party. Notwithstanding the foregoing, (i) specific Confidential Information disclosed by a Disclosing Party shall not be deemed to be within any exceptions set forth in (a), (b), or (c) above merely because it is embraced by more general information to which one or more of those exceptions may apply, (ii) no combination of information shall be deemed to be within any such exceptions unless the combination itself and its principle of operation are within the public domain and (iii) disclosure of Confidential Information to Regulatory Authorities shall not constitute a public disclosure, unless such information is made available to the public by the Regulatory Authority (i.e., it shall remain Confidential Information after such disclosure). Even though Confidential Information may be within one of the exceptions described in the preceding sentence, the Receiving Party shall not disclose to Third Parties that the excepted Confidential Information was received from the Disclosing Party.

7.3 Permitted Uses; Protection. Confidential Information of a Disclosing Party may be used by the Receiving Party in the performance of its obligations under this Agreement, including disclosures to Permitted Contractors who are bound by enforceable confidentiality agreements with terms consistent with and at least as protective as this Article VII, as otherwise expressly authorized in this Agreement or as expressly authorized by the Disclosing Party in writing. Confidential Information that is Licensed Intellectual Property may be used by Gritstone subject to and in accordance with the provisions of this Agreement, to the extent applicable to Gritstone's license to Licensed Intellectual Property, including the Manufacture of the Product. Each Receiving Party shall take steps to maintain the confidentiality of the Disclosing Party's Confidential Information that are consistent with the steps it takes to maintain the confidentiality of its own Confidential Information of a similar value, but in no event less than commercially reasonable steps; *provided, however*, that nothing in this Agreement shall be deemed to eliminate, restrict, or otherwise limit Gritstone's license to use such Confidential Information in accordance with the terms and conditions of this Agreement.

7.4 Permitted Disclosures. The Receiving Party may disclose Confidential Information belonging to the Disclosing Party to the extent (and only to the extent) such disclosure is reasonably necessary in the following instances: (a) by either Party to comply with non-patent Applicable Laws (including any securities Applicable Laws or the rules of a securities exchange in a relevant jurisdiction) and with judicial process, if such disclosure is subject to an order of the court, or with written consent of the Disclosing Party; *provided, however*, that, where legally permissible, (i) the Receiving Party shall notify the Disclosing Party of the Receiving Party's intent to make any disclosure sufficiently prior to making such disclosure so as to allow the Disclosing Party adequate time to take whatever action it may deem appropriate to protect the confidentiality of the information to be disclosed, including seeking protective orders or injunctive relief, and

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(ii) consistent with Applicable Laws, the Disclosing Party shall have the right to suggest reasonable changes to the disclosure to protect its interests, and the Receiving Party shall not unreasonably refuse to include such changes in its disclosure; (b) by Gritstone or its Sublicensees, only as necessary in connection with the Development, Manufacture or Commercialization of Product that use or employ Licensed Intellectual Property, including labeling requirements and disclosures in connection with obtaining Marketing Authorization Approvals, so long as the Development, Manufacture or Commercialization of Product has been and is performed in a manner that complies with the terms and conditions of Gritstone's license to such Licensed Intellectual Property and reasonable steps are taken to maintain the confidentiality of such Confidential Information even when disclosed for such purposes; (c) by either Party for customary discussions and other disclosures with and to current or prospective investors, sublicensees, collaborative partners, acquirers, merger partners, or providers of financing and their advisors, provided that such parties are bound by enforceable obligations of confidentiality consistent with and at least as protective as this Article VII; and (d) as provided in Section 7.6.

7.5 Press Release. Neither Party shall issue a press release or public announcement relating to the other Party or the collaboration activities undertaken pursuant this Agreement without the prior written approval of the other Party, which approval shall not be unreasonably withheld, delayed or conditioned; *provided, however,* that either Party may issue a press release or public announcement as required by Applicable Laws, subject to Section 7.4(a). Except as otherwise provided herein, each Party agrees not to use the name, trademark, service mark, or design registered to the other Party or its Affiliates in any publicity, promotional, or advertising material, without prior written approval of the other Party.

7.6 Securities Filings. If either Party proposes to file with the Securities and Exchange Commission, or the securities regulators of any state or other jurisdiction, a registration statement or any other disclosure document which describes or refers to this Agreement under the Securities Act of 1933, as amended, the Securities Exchange Act of 1934, as amended, or any other applicable securities law, the Party shall notify the other Party of such intention and shall provide such other Party with a copy of relevant portions of the proposed filing not less than [***] Business Days (or such other period as is reasonable under the circumstances) prior to such filing (and any revisions to such portions of the proposed filing a reasonable time prior to the filing thereof), including any exhibits thereto relating to the Agreement, and shall use reasonable efforts to obtain confidential treatment of any information concerning the Agreement that such other Party requests be kept confidential, and shall only disclose Confidential Information which it is advised by counsel is legally required to be disclosed. No such notice shall be required under this Section 7.6 if the substance of the description of or reference to this Agreement contained in the proposed filing has been included in any previous filing made by the either Party hereunder or otherwise approved in writing by the other Party.

7.7 Terms of this Agreement. Except as otherwise specifically set forth in this Article VII, without the prior consent of the other Party, neither Party shall disclose any terms or conditions of this Agreement (including any schedule or exhibit hereto) to any Third Party nor make any statement to the public regarding the execution or any other aspect of the subject matter of this Agreement (including the Development or Commercialization status of Products), except: (a) to the extent such disclosure is required by Applicable Laws or stock exchange rules or regulations and, to the extent practical, the other Party is provided with the opportunity sufficiently in advance of disclosure to review such information and seek confidential treatment thereof; (b) for customary discussions and other disclosures with and to current or prospective investors, lenders, sublicensees, collaborative partners, acquirers, merger partners, or providers of financing and their advisors; or (c) either Party may use the text of a statement previously approved for public dissemination by the other Party. With respect to any disclosures made pursuant to subsection (b) above, each such Third Party recipient of Confidential Information shall be subject to obligations of confidentiality and non-use with respect to such Confidential Information substantially similar to the obligations of confidentiality and non-use of the Receiving Party pursuant to this Article VII.

ARTICLE VIII - INDEMNIFICATION

8.1 Arbutus Indemnification. Arbutus shall indemnify and defend Gritstone and its Affiliates, and their respective agents, directors, officers, employees, representatives, successors and permitted assigns (the "Gritstone Indemnitees") against and shall hold each of them harmless from any and all losses, costs, damages, fees or expenses ("Losses") actually incurred or suffered by a Gritstone Indemnitee to the extent arising out of or in connection with any claim, suit, demand, investigation or proceeding brought by a Third Party based on: (a) [***]. The foregoing indemnification shall not apply to the extent that any Losses are due to Gritstone's, its Affiliates' or its Sublicensees' [***] or [***] or are subject to Gritstone's indemnification obligations pursuant to Section 8.2.

8.2 Gritstone Indemnification. Gritstone shall indemnify and defend Arbutus and its Affiliates, and their respective agents, directors, officers, employees, representatives, successors and permitted assigns (the "Arbutus Indemnitees") against and shall hold each of them harmless from any and all Losses actually incurred or suffered by an Arbutus Indemnitee to the extent arising out of or in connection with any claim, suit, demand, investigation or proceeding brought by a Third Party based on: (a) [***]; (b) [***]; or (c) [***]. The foregoing indemnification obligations shall not apply to the extent that any Losses are due to Arbutus' or its Affiliates' [***] or [***] or are subject to Arbutus' indemnification obligations pursuant to Section 8.1.

8.3 Tender of Defense; Counsel. Any Person seeking indemnification under this Article VIII (the "Indemnified Party") agrees to give prompt notice in writing to the other Party (the "Indemnifying Party") of the assertion of any claim or the commencement of any action by

any Third Party (a "Third Party Claim") in respect of which indemnity may be sought under this Article VIII. Such notice shall set forth in reasonable detail such Third Party Claim and the basis for indemnification (taking into account the information then available to the Indemnified Party). The failure to so notify the Indemnifying Party shall not relieve the Indemnifying Party of its indemnification and hold harmless obligations hereunder, except to the extent such failure shall have materially and adversely prejudiced the Indemnifying Party. The Indemnifying Party shall be entitled to control and appoint lead counsel reasonably satisfactory to the Indemnified Party for such defense by written notice to the Indemnified Party within [***] days after the Indemnifying Party has received notice of the Third Party Claim, in each case at its own expense; *provided, however*, that the Indemnifying Party must use commercially reasonable efforts to conduct the defense of the Third Party Claim in a manner designed to protect the rights of the Indemnified Parties, and otherwise conduct such defense actively and diligently, thereafter in order to preserve its rights in this regard. The Indemnifying Party shall not be entitled to assume or maintain control of the defense of any Third Party Claim and shall pay the fees and expenses of one counsel retained by the Indemnified Party if: (a) the Third Party Claim relates to or arises in connection with any criminal proceeding, action, indictment or allegation; (b) the Third Party Claim seeks an injunction or equitable relief against an Indemnified Party or any of its Affiliates; or (c) the Indemnifying Party, as reasonably and in good faith determined by the Indemnified Party's counsel, has failed or is failing to prosecute or defend vigorously the Third Party Claim. Each Indemnified Party shall obtain the prior written consent of the Indemnifying Party, such consent not to be unreasonably withheld, delayed or conditioned, before entering into any settlement of a Third Party Claim. Notwithstanding the foregoing, the Indemnifying Party shall not be entitled to enter into or approve any settlement of a Third Party Claim without the consent of the Indemnified Party (which may be withheld in its sole discretion), if the settlement (i) does not expressly unconditionally release all applicable Indemnified Parties and their Affiliates from all Losses with respect to such Third Party Claim, (ii) imposes injunctive or other equitable relief against the Indemnified Party or any of its Affiliates, (iii) involves any admission of criminal or similar liability, or (iv) involves any monetary damages that may not be fully covered by the Indemnifying Party. In the event that the Indemnifying Party fails to assume the defense of the Third Party Claim in accordance with this Section 8.3, (1) the Indemnified Party may defend against the Third Party Claim in any manner it reasonably may deem appropriate, and (2) the Indemnifying Party shall remain responsible for any Losses of the Indemnified Party as a result of such Third Party Claim. In circumstances where the Indemnifying Party is controlling the defense of a Third Party Claim in accordance with this Section 8.3, the Indemnified Party shall be entitled to participate in the defense of any Third Party Claim and to employ separate counsel of its choice for such purpose, in which case the fees and expenses of such separate counsel shall be borne by such Indemnified Party. Notwithstanding anything herein to the contrary, in circumstances where there is a conflict of interest that would reasonably make it inappropriate under applicable standards of professional conduct to have common counsel for the Indemnifying Party and the Indemnified Party, the Indemnified Party shall be entitled to employ separate counsel, that is reasonably acceptable to the Indemnifying Party, and the Indemnifying Party shall pay the reasonable fees and expenses of such separate

counsel. Each Party shall cooperate, and cause their respective Affiliates to cooperate in all reasonable respects, in the defense or prosecution of any Third Party Claim and shall furnish or cause to be furnished such records, information and testimony, and attend such conferences, discovery proceedings, hearings, trials or appeals, as may be reasonably requested in connection therewith, all at the expense of the Indemnifying Party.

ARTICLE IX - TERM AND TERMINATION

9.1 Term. The term of this Agreement shall begin on the Effective Date and, unless terminated earlier as provided herein, shall continue until the last to expire Royalty Payment Term (the "Term"). Following expiry of the Royalty Payment Term in respect of any Product or country, Gritstone shall have the paid-up licenses described in Section 4.4.

9.2 Termination for Material Breach. If either Party commits a material breach of any of its obligations under this Agreement, and such breach or default continues without cure for a period of ninety (90) days after delivery by the other Party of written notice reasonably detailing such breach or default, then the other Party shall have the right to terminate this Agreement, with immediate effect, by giving written notice to the breaching Party. The Parties shall retain all rights and remedies (at law or in equity) in respect of any breach hereof. Notwithstanding anything to the contrary in this Section 9.2, above, if the allegedly breaching Party disputes in good faith the existence or materiality of such breach and provides notice to the other Party of such dispute within such cure period, such other Party will not have the right to terminate this Agreement in accordance with this Section 9.2 unless and until it has been determined in accordance with Section 10.7 that this Agreement was materially breached by the allegedly breaching Party and failed to cure such breach within the applicable cure period or that the terminating Party has a basis for such termination in accordance with this Agreement.

9.3 Termination at Will. Gritstone shall have the right to terminate this Agreement at any time in its sole discretion for any reason or no reason at all by giving sixty (60) days' advance written notice to Arbutus.

9.4 Termination for Safety, Efficacy, or Regulatory Reasons. Notwithstanding Section 9.3, Gritstone may terminate this Agreement in its entirety or on a Product-by-Product or country-by-country basis by providing written notice to Arbutus if, (i) prior to Regulatory Approval of a Product in the Field in such country, Gritstone determines in good faith, using reasonable preclinical and/or clinical judgment that there are material concerns regarding the safety of any Product (a "Safety Failure"); (ii) a Product fails to substantially achieve any of the primary or secondary efficacy endpoints (including [***]) of any preclinical or clinical trial involving the Product (an "Efficacy Failure"); or (iii) any Regulatory Authority takes any action, or raises any objection, that [***]; *provided, however*, that Gritstone acts in good faith in making such determination and reasonably consults with Arbutus prior to terminating this Agreement due to a Safety Failure or Efficacy Failure.

9.5 Termination for Gritstone's Abandonment. If Gritstone or its Affiliates or Sublicensees fail to undertake any material Research, Development, Manufacturing, or Commercialization activity in respect of any Product for a period greater than [***] (excluding any time spent waiting on any notification from a Regulatory Authority related thereto), Arbutus shall have the right to request a meeting with Gritstone to discuss in good faith whether Gritstone has abandoned the Research, Development, Manufacture or Commercialization of the Product. Following such meeting, if the Parties are unable to reach agreement on the foregoing, subject to completion of any dispute resolution process initiated by Gritstone pursuant to Section 10.7, Arbutus may terminate this Agreement upon completion of such dispute resolution process if it has been determined thereunder that Gritstone has failed to undertake any such Research, Development, Manufacturing, or Commercialization activity.

9.6 Challenges of Arbutus Patents. If Gritstone or any of its Affiliates or Sublicensees directly or indirectly and voluntarily commences or participates in any Challenge of any of the Arbutus Patents, Arbutus shall have the right to give notice to Gritstone (which notice must be given, if at all, within ninety (90) days after Arbutus' CEO or General Counsel first learns of the foregoing) that the licenses granted by Arbutus to Gritstone hereunder to such Arbutus Patent(s) shall terminate ninety (90) days following Gritstone's receipt of such notice, and, unless Gritstone or its Affiliates or Sublicensees, as applicable, withdraw or cause to be withdrawn all such Challenge(s) within such ninety (90)-day period, such licenses to such Arbutus Patent shall so terminate; *provided* that, if such action, proceeding or assertion is made by a Sublicensee, the license shall only terminate with respect to the sublicense granted to such Sublicensee; *provided further* that, if such Challenge is brought by a Sublicensee, Arbutus may not so terminate this Agreement if Gritstone has terminated all sublicenses granted to such Sublicensee hereunder within ninety (90) days after Gritstone has received written notice from Arbutus of such Challenge. For the purpose of this Section, "Challenge" means any challenge to the validity or enforceability of the applicable Arbutus Patent, including by (a) filing a declaratory judgment action in which the applicable Arbutus Patent is alleged to be invalid or unenforceable, (b) becoming party to an interference with the applicable Arbutus Patent pursuant to 35 U.S.C. §135 or (c) filing or commencing any re-examination, opposition, cancellation, nullity or similar proceedings against the applicable Arbutus Patent, or petitioning for any form of administrative or judicial (or arbitration) review of the applicable Arbutus Patent, including post-grant review, inter partes review, or opposition proceedings; *provided, however*, that the term Challenge shall not include arguments, or any other statements or allegations, made by or on behalf of Gritstone, its Affiliate, or its Sublicensee that (i) distinguish the inventions claimed in patents or patent applications owned or controlled (except by virtue of this Agreement) by Gritstone, its Affiliate, or its Sublicensee from those claimed in the Arbutus Patents (A) in the ordinary course of ex parte prosecution of such patents or patent applications owned or controlled by Gritstone, its Affiliate, or its Sublicensee, including any reissue or reexamination patents or patent applications or (B) in inter partes, post grant review proceedings, oppositions, nullity proceedings, reissue proceedings, reexamination proceedings, and other similar proceedings before the U.S. Patent & Trademark

Office or other agency or tribunal in any jurisdiction, or in any arbitration or litigation, wherein such patents or patent applications owned or controlled by Gritstone, its Affiliate, or its Sublicensee have been challenged; or (ii) are made in connection with a response to a claim or allegation that Gritstone, its Affiliate, or its Sublicensee, or any of their respective direct or indirect customers infringes or may infringe any Patents Controlled or enforceable by Arbutus, its Affiliates, or any of their respective successors or assigns. Neither Gritstone's, its Affiliates', a Sublicensee's, or any of their employees' participating in or appearing in any such action, proceeding or claim as a result of receiving a subpoena or other court order requiring such participation or appearance shall give rise to a right for Arbutus to terminate as set forth in this Section 9.5.

9.7 Rights in Bankruptcy. Each Party (the "Insolvent Party") shall promptly notify the other Party (the "Solvent Party") in writing upon the initiation of any proceeding in bankruptcy, reorganization, dissolution, liquidation or arrangement for the appointment of a receiver or trustee to take possession of the assets of the Insolvent Party or similar proceeding under law for release of creditors by or against the Insolvent Party or if the Insolvent Party shall make a general assignment for the benefit of its creditors. To the extent permitted by Applicable Laws, if the applicable circumstances described above shall have continued for ninety (90) days undismissed, unstayed, unbonded and undischarged, the Solvent Party may terminate this Agreement upon written notice to the Insolvent Party at any time. If Arbutus is the Insolvent Party, the rights and remedies granted to Gritstone (as the Solvent Party) pursuant to this Section 9.6 shall be in addition to, and not in lieu of, Gritstone's rights and remedies under Section 2.4.

9.8 Consequences of Expiration or Termination; Survival.

(a) Expiration or termination of this Agreement shall not relieve the Parties of any obligation accruing prior to or upon such expiration or termination, and the provisions of Sections 2.4, the second sentence of 5.3, 6.1, 6.2, 9.7, 9.8, 9.9, and 10.2–10.16 and Article I (Definitions), Article VII (Confidential Information and Publicity) (for the term set forth in Section 7.1), and Article VIII (Indemnification) shall survive any expiration or termination of this Agreement.

(b) Notwithstanding anything to the contrary contained herein, if, prior to the First Commercial Sale of any Product, Gritstone terminates this Agreement pursuant to Section 9.3 (Termination at Will) but not, for clarity Section 9.4 (Termination for Regulatory or Technical Reasons), in addition to the effects of termination set forth in this Section 9.8, Gritstone shall pay Arbutus [***] dollars (\$[***]).

(c) On the effective date of termination of this Agreement between the Parties, each Party shall promptly return to the other Party all written Confidential Information of the other Party, and all copies thereof (except for one archival copy to be retained solely for the purpose of confirming which information to hold in confidence hereunder and any backup copies generated by such Party's information technology systems).

(d) In the event this Agreement is properly terminated in accordance with its terms, then the license granted under Section 2.1 shall terminate upon the effective date of such termination, subject to Section 2.2(d). The termination by Arbutus of the rights granted to Gritstone under Section 2.1 in respect of any specific Product(s) in any specific country(ies) shall be without prejudice to:

(i) Any sublicenses that survive in accordance with Section 2.2(d);

(ii) Arbutus' right to receive all payments from Gritstone accrued under this Agreement as of the effective date of termination, which, costs shall include Arbutus' reasonable and necessary non-cancelable obligations to Third Parties actually incurred by Arbutus in the performance of its obligations under this Agreement prior to the date of notice of termination; and

(iii) Arbutus' right to receive within [***] days after the effective date of such termination, a written report from Gritstone detailing the amount of Product(s) that Gritstone, its Affiliates, Sublicensees and sub-Sublicensees then have completed on hand, the sale of which would, but for the termination, be subject to Royalty.

9.9 Remedies. The Parties acknowledge and agree that, in the event of a breach or a threatened breach by either Party of this Agreement for which it shall have no adequate remedy at law, the other Party may suffer irreparable damage and, accordingly, may be entitled to injunctive and other equitable remedies to prevent or restrain such breach or threatened breach, in addition to any other remedy they might have at law or at equity. In the event of a breach or threatened breach by a Party of any such provision, the other Party shall be authorized and entitled to seek from any court of competent jurisdiction injunctive relief, whether preliminary or permanent, arising from such breach, which rights shall be cumulative and in addition to any other rights or remedies to which the other Party may be entitled in law or equity.

ARTICLE X - MISCELLANEOUS

10.1 Representations and Warranties.

(a) Mutual Representations, Warranties, and Covenants. Each Party hereby represents, warrants, and covenants to the other Party that:

(i) as of the Effective Date, it is duly organized and validly existing under the laws of the jurisdiction of its incorporation or formation, and has all necessary power and authority to conduct its business in the manner in which it is currently being conducted, to own and use its assets in the manner in which its assets are currently owned and used, and to enter into and perform its obligations under this Agreement;

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[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

(ii) as of the Effective Date, the execution, delivery and performance of this Agreement has been duly authorized by all necessary action on the part of such Party and its Board of Directors or other governing body and no consent, approval, order or authorization of, or registration, declaration or filing with any Third Party or Governmental Authority is necessary for the execution, delivery or performance of this Agreement;

(iii) as of the Effective Date, this Agreement constitutes the legal, valid and binding obligation of such Party, enforceable against it in accordance with its terms, subject to (A) Applicable Laws of general application relating to bankruptcy, insolvency and the relief of debtors, and (B) Applicable Laws governing specific performance, injunctive relief and other equitable remedies;

(iv) such Party shall perform its obligations herein in compliance with all Applicable Laws; and

(v) neither such Party nor any of its Affiliates or their employees have ever been, and neither such Party nor any of its Affiliates shall use any individual in the performance of Research and Development of Products under this Agreement that has been (A) convicted of a crime for which a Person can be debarred under Section 306(a) or 306(b) of the Generic Drug Enforcement Act of 1992 or under 42 U.S.C. Section 1320-7 or (B) sanctioned by, suspended, excluded or otherwise ineligible to participate in any federal health care program, including Medicare and Medicaid or in federal procurement or non-procurement programs. If at any time this representation and warranty is no longer accurate, Arbutus or Gritstone, as the case may be, shall immediately notify the other of such fact.

(b) Arbutus Representations, Warranties, and Covenants. Arbutus hereby represents, warrants, and covenants to Gritstone that:

(i) as of the Effective Date, it is entitled to grant the rights and licenses granted to Gritstone under this Agreement, and is not currently bound by any agreement with any Third Party, or by any outstanding order, judgment, or decree of any court or administrative agency, that restricts it in any way from granting to Gritstone the rights and licenses as set forth in this Agreement;

(ii) as of the Effective Date, Arbutus has no knowledge that the Manufacture, use, sale and import of Licensed Intellectual Property, including as may be used in a Product, infringes, misappropriates or otherwise violates any issued Patent or other Intellectual Property right of any Third Party anywhere in the Territory;

(iii) neither Arbutus nor any of its Affiliates has assigned, transferred, conveyed or otherwise encumbered, nor during the Term shall assign, transfer, license, convey or otherwise encumber, its right, title and interest in the Arbutus Patents, Confidential Information and other Licensed Intellectual Property either owned by or exclusively licensed to Arbutus as of the Effective Date in a manner that conflicts with any rights granted to Gritstone hereunder;

(iv) Arbutus has not, and shall not following the Effective Date (A) grant any rights that are inconsistent with the rights granted to Gritstone herein or (B) take any action that would prevent it from granting the rights granted to Gritstone under this Agreement, or that would otherwise materially conflict with or adversely affect Gritstone's rights under this Agreement;

(v) Attached hereto as Exhibit A is a complete and accurate list of all published and issued Arbutus Patents owned by Arbutus or any of its Affiliates as of the Effective Date. None of Arbutus nor its Affiliates own any right, title or interest (including any option to obtain the same) in or to any Patents, Know-How or Materials that both (A) are [***] to Commercialize LNPs, and (B) do not constitute "Arbutus Patents" [***]. There are no Patents licensed to Arbutus under the UBC Agreement, other than the Excluded Arbutus Patents. [***];

(vi) as of the Effective Date, all Licensed Intellectual Property is Controlled by Arbutus, other than commercially available software and commercially available laboratory materials. Following the Effective Date, Arbutus will not enter into any agreement with any Affiliate or Third Party that would conflict with the grant of the licenses and other rights to Gritstone hereunder to the Licensed Intellectual Property, and Arbutus will not use any technology in the performance of activities under this Agreement that would infringe any of the Excluded Arbutus Patents;

(vii) Arbutus has not received any written notice of, and is not aware of, any claims or allegations that a Third Party has any right or interest in or to any Arbutus Patent or any other Licensed Intellectual Property or that any Third Party claims or allegations that the Arbutus Patents are invalid or unenforceable;

(viii) Arbutus has not received, nor is it aware of, any claims or allegations that practice of the Licensed Intellectual Property infringes or misappropriates any Intellectual Property rights of any Third Party;

(ix) Arbutus has no knowledge of any infringement by any Third Party of any of the Arbutus Patents as of the Effective Date;

(x) all inventors of any inventions included within the Licensed Intellectual Property Controlled by Arbutus as of the Effective Date have assigned their entire right, title, and interest in and to such inventions and the corresponding Arbutus Patents to Arbutus;

to Arbutus' knowledge, no person, other than those persons named as inventors on any Arbutus Patents, is, or has alleged to Arbutus to be, an inventor of the invention(s) claimed in such Arbutus Patents; and with respect to all Arbutus Patents as of the Effective Date to Arbutus' knowledge: (A) each has been prosecuted in material compliance with all applicable rules, policies, and procedures of the U.S. Patent & Trademark Office and (B) each is subsisting and in good standing;

(xi) as of the Effective Date, to Arbutus' knowledge, the Licensed Intellectual Property does not include any trade secrets that have been misappropriated from any Third Party or obtained in breach of any contractual obligation of Arbutus or its employees to a Third Party;

(xii) to Arbutus' knowledge, there is no material prior art or any other fact that would likely render the claims in the Arbutus Patents issued as of the Effective Date unpatentable, invalid, or unenforceable in whole or in part; and

(xiii) any and all materials provided to Gritstone under this Agreement will, at the time of delivery to Gritstone meet the applicable mutually agreed upon specifications therefor, manufactured and tested in accordance with Applicable Laws, including GLP if applicable.

(c) Warranty Disclaimer. EXCEPT AS OTHERWISE EXPRESSLY PROVIDED IN THIS AGREEMENT, NEITHER PARTY MAKES ANY REPRESENTATION OR EXTENDS ANY WARRANTY OR CONDITIONS OF ANY KIND, EITHER EXPRESS OR IMPLIED, TO THE OTHER PARTY WITH RESPECT TO ANY INTELLECTUAL PROPERTY, PRODUCTS, GOODS, RIGHTS OR OTHER SUBJECT MATTER OF THIS AGREEMENT AND HEREBY DISCLAIMS ALL IMPLIED CONDITIONS, REPRESENTATIONS, AND WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OR VALIDITY OF PATENTS WITH RESPECT TO ANY AND ALL OF THE FOREGOING. EACH PARTY HEREBY DISCLAIMS ANY REPRESENTATION OR WARRANTY THAT THE DEVELOPMENT, MANUFACTURE OR COMMERCIALIZATION OF ANY PRODUCT PURSUANT TO THIS AGREEMENT SHALL BE SUCCESSFUL OR THAT ANY PARTICULAR SALES LEVEL WITH RESPECT TO ANY SUCH PRODUCT SHALL BE ACHIEVED.

10.2 Force Majeure. A Party shall neither be held liable or responsible to any other Party, nor be deemed to have defaulted under or breached this Agreement, for failure or delay in fulfilling or performing any term of this Agreement to the extent, and for so long as, such failure or delay is caused by or results from causes beyond the reasonable control of the affected Party, including fire, floods, embargoes, power shortage or failure, acts of war (whether war be declared or not), insurrections, riots, terrorism, civil commotions, strikes, lockouts or other labor disturbances, acts of God or any acts, omissions or delays in acting by any Governmental Authority or any other Party, and such affected Party promptly begins performing under this Agreement once such causes have been removed.

10.3 Consequential Damages. NO PARTY SHALL BE LIABLE TO ANY OTHER PARTY WITH RESPECT TO THIS AGREEMENT, AND THE ACTIVITIES CONTEMPLATED HEREBY, FOR ANY CONSEQUENTIAL, INDIRECT, SPECIAL, PUNITIVE, INCIDENTAL OR SIMILAR DAMAGES, WHETHER FORESEEABLE OR UNFORESEEABLE AND REGARDLESS OF THE CAUSE OF ACTION FROM WHICH THEY ARISE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OCCURRING. NOTWITHSTANDING THE FOREGOING, NOTHING IN THIS SECTION 10.3 IS INTENDED TO OR SHALL LIMIT OR RESTRICT THE INDEMNIFICATION RIGHTS OF A PARTY OR DAMAGES AVAILABLE FOR A PARTY'S BREACH OF CONFIDENTIALITY OBLIGATIONS IN ARTICLE VII.

10.4 Assignment; Change of Control.

10.4.1 Neither Party shall assign or transfer any of its rights and obligations hereunder without the prior written consent of the other Party, except (a) to a purchaser of all or substantially all of the assets or business of such Party to which this Agreement relates, or to the Successor resulting from any Change of Control, or (b) to an Affiliate; *provided, however*, that (i) such assignment to an Affiliate shall not relieve such Party of its obligations herein, and (ii) in each case, the assigning Party shall provide the other Party with written notice of such assignment or transfer within [***] days after such assignment or transfer. Any purported transfer or assignment in contravention of this Section 10.4.1 shall, at the option of the non-assigning Party, be null and void and of no effect. This Agreement shall be binding upon and inure to the benefit of the Parties and their permitted successors and assigns.

10.4.2 From and after an Arbutus Change of Control Event, (a) [***], (b) [***], (c) notwithstanding anything to the contrary in Section [***], [***], and (d) [***].

10.5 Notices.

Notices to Gritstone shall be addressed to:

Gritstone Oncology, Inc.
5858 Horton Street, Suite 210
Emeryville, CA 94608
Attn: [***]

With a copy to (which shall not constitute notice):

Latham & Watkins LLP
140 Scott Drive
Menlo Park, CA 94025 U.S.A.
Attn: [***]
Facsimile: [***]

Notices to Arbutus shall be addressed to:

Arbutus Biopharma Corporation
100-8900 Glenlyon Parkway
Burnaby, B.C.
Canada V5J 5J8
Attention: President & CEO
Facsimile: [***]

With a copy to (which shall not constitute notice):

Orrick, Herrington & Sutcliffe LLP
51 West 52nd Street
New York, NY 10019
Attention: [***]
Facsimile: [***]

Any Party may change their address by giving notice to the other Parties in the manner provided in this Section 10.5. Any notice required or provided for by the terms of this Agreement shall be in writing and shall be (a) sent by certified mail, return receipt requested, postage prepaid, (b) sent via a reputable international express courier service, or (c) sent by facsimile transmission, with a copy by regular mail. The effective date of the notice shall be the actual date of receipt by the receiving party.

10.6 Independent Contractors. It is understood and agreed that the relationship between the Parties is that of independent contractors and that nothing in this Agreement shall be construed as authorization for either Party to act as the agent for the other Party.

10.7 Governing Law; Dispute Resolution.

(a) This Agreement shall be governed and interpreted in accordance with the substantive laws of the State of New York, excluding its conflicts of laws principles.

(b) The Parties recognize that a *bona fide* dispute as to certain matters may from time to time arise during the Term that relate to a Party's rights or obligations hereunder. In the event of the occurrence of any such dispute, the Parties shall first have such dispute referred to their respective executives designated below for attempted resolution by good faith negotiations

within [***] days after such notice is received. If the matter is not resolved within such [***] days, either Party shall thereafter have the right to pursue any and all other remedies available at law or in equity, subject to this Section 10.7. For clarity, any disputes, controversies or differences arising from the JSC shall be resolved solely in accordance with Section 3.1.

(c) The Parties consent to the exclusive jurisdiction of the Federal courts and the State courts of the State of New York, in each case, located in the borough of Manhattan, City of New York for any action referenced in Section 10.7(b) THE PARTIES HEREBY IRREVOCABLY WAIVE, AND AGREE TO CAUSE THEIR RESPECTIVE AFFILIATES TO WAIVE, THE RIGHT TO TRIAL BY JURY IN SUCH ACTIONS.

10.8 Severability. In the event that any provision of this Agreement is held by a court of competent jurisdiction to be unenforceable because it is invalid or in conflict with any law of the relevant jurisdiction, the validity of the remaining provisions shall not be affected and the rights and obligations of the Parties shall be construed and enforced as if the Agreement did not contain the particular provisions held to be unenforceable, *provided* that the Parties, shall negotiate in good faith a modification of this Agreement with a view to revising this Agreement in a manner that reflects, as closely as is reasonably practicable, the commercial terms of this Agreement as originally signed.

10.9 No Implied Waivers. The waiver by any Party of a breach or default of any provision of this Agreement by any other Party shall not be construed as a waiver of any succeeding breach of the same or any other provision, nor shall any delay or omission on the part of any Party to exercise or avail itself of any right, power or privilege that it has or may have hereunder operate as a waiver of any right, power or privilege by such Party.

10.10 Headings. The headings of articles and sections contained in this Agreement are intended solely for convenience and ease of reference and do not constitute any part of this Agreement, or have any effect on its interpretation or construction.

10.11 Entire Agreement; Amendment. This Agreement (along with the attachments) contains the entire understanding of the Parties with respect to the subject matter hereof and thereof and supersede and replace any and all previous or contemporaneous arrangements and understandings, whether oral or written, between the Parties with respect to the subject matter hereof and thereof, excluding the Mutual Non-Disclosure Agreement entered into by Arbutus and Gritstone on January 5, 2017, which shall survive with respect to any Confidential Information disclosed thereunder prior to the Effective Date. This Agreement (including the attachments hereto) may be amended only by a writing signed by each of the Parties.

10.12 Waiver of Rule of Construction. Each Party has had the opportunity to consult with counsel in connection with the review, drafting and negotiation of this Agreement. Accordingly, the rule of construction that any ambiguity in this Agreement shall be construed against the drafting party shall not apply.

10.13 No Third-Party Beneficiaries. Except as expressly contemplated herein, no Third Party, including any employee of either Party, shall have or acquire any rights by reason of this Agreement.

10.14 Further Assurances. Each Party shall provide such further documents or instruments required by the other Party as may be reasonably necessary or desirable to give effect to the purpose of this Agreement and carry out its provisions.

10.15 Performance by Affiliates. Either Party may use one or more of its Affiliates to perform its obligations and duties hereunder, and Affiliates of a Party are expressly granted certain rights herein; *provided* that each such Affiliate shall be bound by the corresponding obligations of such Party and the relevant Party shall remain liable hereunder for the prompt payment and performance of all their respective obligations hereunder.

10.16 Counterparts. This Agreement may be executed in any number of counterparts in original or by facsimile or PDF copy, each of which shall be deemed an original, and all of which together shall constitute one and the same instrument.

[Signature Page Follows]

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[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

IN WITNESS WHEREOF, authorized representatives of Gritstone, ABUS and Protiva have executed and delivered this Agreement effective as of the Effective Date.

GRITSTONE ONCOLOGY, INC.

By: /s/ Andrew R. Allen
Name: Andrew R. Allen
Title: President & CEO

PROTIVA BIOTHERAPEUTICS INC.

By: /s/ Mark J. Murray
Name: Mark J Murray
Title: President and CEO

By: /s/ Bruce Cousins
Name: Bruce Cousins
Title: Executive Vice President & CFO

ARBUTUS BIOPHARMA CORPORATION

By: /s/ Mark J Murray
Name: Mark J Murray
Title: President and CEO

By: /s/ Bruce Cousins
Name: Bruce Cousins
Title: Executive Vice President & CFO

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Exhibit A

Arbutus Patents

[***]

[***] Twenty-five pages have been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Exhibit B
Research Plan

[***]

[***] Eleven pages have been omitted and filed separately with the Securities and Exchange Commission.
Confidential treatment has been requested with respect to the omitted portions.

Exhibit C
Excluded Patents

[***]

[***] Seven pages have been omitted and filed separately with the Securities and Exchange Commission.
Confidential treatment has been requested with respect to the omitted portions.

Exhibit D
LNP Competitor

[***]

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

Exhibit E

Non-Exclusive Patents

[***]

[***] Twenty-four pages have been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

AMENDMENT NUMBER ONE TO LICENSE AGREEMENT

This Amendment Number One to License Agreement ("Amendment No. 1") is made by and between (a) Gritstone Oncology, Inc., a Delaware corporation having a place of business at 5858 Horton Street, Suite 210, Emeryville, California 94608, U.S.A. ("Gritstone"), on the one hand, and (b) Protiva Biotherapeutics Inc., a British Columbia corporation with a principal place of business at 100-8900 Glenlyon Parkway, Burnaby, B.C., Canada V5J 5J8 ("Protiva"), and Arbutus Biopharma Corporation, a British Columbia corporation with a principal place of business at 100-8900 Glenlyon Parkway, Burnaby, B.C., Canada V5J 5J8 ("ABUS") and together with Protiva, ("Arbutus"), on the other hand. Gritstone, Protiva, and ABUS may each be referred to herein as a "Party," and collectively as the "Parties."

WHEREAS, the Parties entered into the License Agreement, effective on October 16, 2017, (the "Agreement"); and

WHEREAS, the Parties desire to amend certain terms of the Agreement in accordance with this Amendment No. 1, and this Amendment No. 1 shall be effective as of July 20, 2018 (the "Amendment No. 1 Effective Date").

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the Parties, the Parties, intending to be legally bound, agree as follows:

1. All capitalized terms used herein and not otherwise defined shall have the meanings assigned to such terms in the Agreement.
2. The definition of "Product" shall be deleted and replaced in its entirety with the following definition:

"Product" means a product containing [***] RNA that encodes [***] TSNA and that is formulated in an Arbutus LNP; *provided* that such RNA is part of a Self-Replicating RNA System and is not a non-replicating messenger RNA ("mRNA")."
3. In the event of any discrepancies or conflicting terms between this Amendment No. 1 and the Agreement, the terms of this Amendment No. 1 shall control.
4. The Agreement and this Amendment No. 1 represent the complete and entire understanding between the Parties regarding the subject matter hereof and supersedes all prior negotiations, representations or agreements, either written or oral, regarding this subject matter.
5. This Amendment No. 1 shall be governed and interpreted in accordance with the substantive laws of the State of New York, excluding its conflicts of laws principles.

6. Arbutus hereby represents, warrants, and covenants to Gritstone that: (a) as of the Amendment No. 1 Effective Date, it is entitled to grant the rights and licenses granted to Gritstone under the Agreement as amended by this Amendment No. 1, and is not currently bound by any agreement with any Third Party, or by any outstanding order, judgment, or decree of any court or administrative agency, that restricts it in any way from granting to Gritstone the rights and licenses as set forth in the Agreement as amended by this Amendment No. 1; and (b) neither Arbutus nor any of its Affiliates has assigned, transferred, conveyed or otherwise encumbered, nor during the Term shall assign, transfer, license, convey or otherwise encumber, its right, title and interest in the Arbutus Patents, Confidential Information and other Licensed Intellectual Property either owned by or exclusively licensed to Arbutus as of the Effective Date in a manner that conflicts with any rights granted to Gritstone under the Agreement as amended by this Amendment No. 1.
7. This Amendment No. 1 may be executed in counterparts, each of which shall be deemed an original and, together, one and the same instrument. A facsimile, PDF or any other copy of this Amendment No. 1 signed by a Party is binding upon the signing Party to the same extent as the original of the signed Amendment No. 1, and may be delivered electronically.
8. Except for the matters set forth in this Amendment No. 1, all other terms of the Agreement shall remain unchanged and in full force and effect.

[Signature Page Follows]

IN WITNESS WHEREOF, authorized representatives of Gritstone, ABUS and Protiva have executed and delivered this Amendment No. 1 effective as of the Amendment No. 1 Effective Date.

GRITSTONE ONCOLOGY, INC.

By: /s/ Andrew R. Allen
Name: Andrew R. Allen
Title: President and CEO

PROTIVA BIOTHERAPEUTICS INC.

By: /s/ Mark J Murray
Name: Mark J Murray
Title: President and CEO

By: _____
Name:
Title:

ARBUTUS BIOPHARMA CORPORATION

By: /s/ Mark J Murray
Name: Mark J Murray
Title: President and CEO

By: _____
Name:
Title:

GRITSTONE ONCOLOGY, INC.
AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT
June 29, 2018

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Schedule A - Schedule of Investors

AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

This AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT (this "**Agreement**"), is made as of June 29, 2018, by and among Gritstone Oncology, Inc., a Delaware corporation (the "**Company**"), and each of the investors listed on Schedule A hereto, each of which is referred to in this Agreement as an "**Investor**" and any Additional Purchaser (as defined in the Purchase Agreement (as defined below)) that becomes a party to this Agreement in accordance with Section 6.9 hereof.

RECITALS

WHEREAS, the Company and certain of the Investors (the "**Existing Investors**") are parties to that certain Investors' Rights Agreement, dated September 5, 2017 (the "**Prior Agreement**").

WHEREAS, pursuant to Section 6.6 of the Prior Agreement and subject to certain specified exceptions, any term of the Prior Agreement may be amended and the observance of any term of the Prior Agreement may be waived (either generally or in a particular instance, and either retroactively or prospectively) with the written consent of the Company and the holders of at least a majority of the Registrable Securities (as defined in the Prior Agreement) then outstanding (the "**Requisite Existing Investors**").

WHEREAS, the Company and certain of the Investors (the "**Participating Investors**") are parties to the Series C Preferred Stock Purchase Agreement of even date herewith (as may be amended from time to time, the "**Purchase Agreement**").

WHEREAS, in order to induce the Company to enter into the Purchase Agreement and to induce the Participating Investors to invest funds in the Company pursuant to the Purchase Agreement, the Company and the undersigned Existing Investors, constituting the Requisite Existing Investors, desire to amend and restate and supersede the Prior Agreement in its entirety as set forth herein and to accept the rights created pursuant to this Agreement in lieu of the rights granted to them under the Prior Agreement.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company and the undersigned Existing Investors, constituting the Requisite Existing Investors, hereby agree that the Prior Agreement shall be amended and restated and superseded in its entirety by this Agreement, and the parties to this Agreement further agree as follows:

1. Definitions. For purposes of this Agreement:

1.1 "**Affiliate**" means, with respect to any specified Person, any other Person who, directly or indirectly, controls, is controlled by, or is under common control with such Person, including without limitation any general partner, managing member, officer or director of such Person or any venture capital fund now or hereafter existing that is controlled by one or more general partners or managing members of, or shares the same management company with, such Person.

1.2 “**Board of Directors**” means the board of directors of the Company.

1.3 “**Common Stock**” means shares of the Company’s common stock, par value \$0.0001 per share.

1.4 “**Damages**” means any loss, damage, claim or liability (joint or several) to which a party hereto may become subject under the Securities Act, the Exchange Act, or other federal or state law, insofar as such loss, damage, claim or liability (or any action in respect thereof) arises out of or is based upon: (i) any untrue statement or alleged untrue statement of a material fact contained in any registration statement of the Company, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (ii) an omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading; or (iii) any violation or alleged violation by the indemnifying party (or any of its agents or Affiliates) of the Securities Act, the Exchange Act, any state securities law, or any rule or regulation promulgated under the Securities Act, the Exchange Act, or any state securities law.

1.5 “**Derivative Securities**” means any securities or rights convertible into, or exercisable or exchangeable for (in each case, directly or indirectly), Common Stock, including options and warrants.

1.6 “**Exchange Act**” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

1.7 “**Excluded Registration**” means (i) a registration relating to the sale of securities to employees of the Company or a subsidiary pursuant to a stock option, stock purchase, or similar plan; (ii) a registration relating to an SEC Rule 145 transaction; (iii) a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities; or (iv) a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered.

1.8 “**Form S-1**” means such form under the Securities Act as in effect on the date hereof or any successor registration form under the Securities Act subsequently adopted by the SEC.

1.9 “**Form S-3**” means such form under the Securities Act as in effect on the date hereof or any registration form under the Securities Act subsequently adopted by the SEC that permits incorporation of substantial information by reference to other documents filed by the Company with the SEC.

1.10 “**GAAP**” means generally accepted accounting principles in the United States.

1.11 “**Holder**” means any holder of Registrable Securities who is a party to this Agreement.

1.12 “**Immediate Family Member**” means a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, domestic partner, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including, adoptive relationships, of a natural person referred to herein.

1.13 “**Initiating Holders**” means, collectively, Holders who properly initiate a registration request under this Agreement.

1.14 “**IPO**” means the Company’s first underwritten public offering of its Common Stock under the Securities Act.

1.15 “**Major Investor**” means any Investor that, individually or together with such Investor’s Affiliates, holds at least 2,500,000 shares of Registrable Securities (as adjusted for any stock split, stock dividend, combination, or other recapitalization or reclassification effected after the date hereof).

1.16 “**New Securities**” means, collectively, equity securities of the Company, whether or not currently authorized, as well as rights, options, or warrants to purchase such equity securities, and securities of any type whatsoever that are, or may become, convertible or exchangeable into or exercisable for such equity securities.

1.17 “**Person**” means any individual, corporation, partnership, trust, limited liability company, association or other entity.

1.18 “**Preferred Directors**” means, collectively, the Series A Directors (as defined in the Restated Certificate) and the Series B Director (as defined in the Restated Certificate).

1.19 “**Preferred Stock**” means, collectively, shares of the Company’s Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock.

1.20 “**Registrable Securities**” means (i) the Common Stock issuable or issued upon conversion of the Preferred Stock; (ii) any Common Stock, or any Common Stock issued or issuable (directly or indirectly) upon conversion and/or exercise of any other securities of the Company acquired by the Investors after the date hereof and (iii) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, the shares referenced in clauses (i) and (ii) above; excluding in all cases, however, any Registrable Securities sold by a Person in a transaction in which the applicable rights under this Agreement are not assigned pursuant to Section 6.1, and excluding for purposes of Section 2 and Section 6.6 (with regard to consents to amendment and waiver) any shares for which registration rights have terminated pursuant to Section 2.13 of this Agreement.

1.21 “**Registrable Securities then outstanding**” means the number of shares determined by adding the number of shares of outstanding Common Stock that are Registrable Securities and the number of shares of Common Stock issuable (directly or indirectly) pursuant to then exercisable and/or convertible securities that are Registrable Securities.

- time.
- 1.22 “**Restated Certificate**” means the Company’s Amended and Restated Certificate of Incorporation, as may be amended from time to time.
- 1.23 “**Restricted Securities**” means the securities of the Company required to be notated with the legend set forth in Section 2.12(b) hereof.
- 1.24 “**SEC**” means the Securities and Exchange Commission.
- 1.25 “**SEC Rule 144**” means Rule 144 promulgated by the SEC under the Securities Act.
- 1.26 “**SEC Rule 145**” means Rule 145 promulgated by the SEC under the Securities Act.
- 1.27 “**Securities Act**” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.
- 1.28 “**Selling Expenses**” means all underwriting discounts, selling commissions, and stock transfer taxes applicable to the sale of Registrable Securities, and fees and disbursements of counsel for any Holder, except for the fees and disbursements of the Selling Holder Counsel borne and paid by the Company as provided in Section 2.6.
- 1.29 “**Series A Preferred Stock**” means shares of the Company’s Series A Preferred Stock, par value \$0.0001 per share.
- 1.30 “**Series B Preferred Stock**” means shares of the Company’s Series B Preferred Stock, par value \$0.0001 per share.
- 1.31 “**Series C Preferred Stock**” means shares of the Company’s Series C Preferred Stock, par value \$0.0001 per share.

2. Registration Rights. The Company covenants and agrees as follows:

2.1 Demand Registration.

(a) Form S-1 Demand. If at any time after the earlier of (i) four (4) years after the date of this Agreement or (ii) one hundred eighty (180) days after the effective date of the registration statement for the IPO, the Company receives a request from Holders of at least 30% of the Registrable Securities then outstanding that the Company file a Form S-1 registration statement with respect to at least thirty percent (30%) of the Registrable Securities then outstanding (or a lesser percent if the anticipated aggregate offering price, net of Selling Expenses, would exceed \$10.0 million), then the Company shall (x) within ten (10) days after the date such request is given, give notice thereof (the “**Demand Notice**”) to all Holders other than the Initiating Holders; and (y) as soon as practicable, and in any event within sixty (60) days

after the date such request is given by the Initiating Holders, file a Form S-1 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered and any additional Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Sections 2.1(c) and 2.3.

(b) Form S-3 Demand. If at any time when it is eligible to use a Form S-3 registration statement, the Company receives a request from Holders of at least thirty percent (30%) of the Registrable Securities then outstanding that the Company file a Form S-3 registration statement with respect to outstanding Registrable Securities of such Holders having an anticipated aggregate offering price, net of Selling Expenses, of at least \$10.0 million, then the Company shall (i) within ten (10) days after the date such request is given, give a Demand Notice to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within forty-five (45) days after the date such request is given by the Initiating Holders, file a Form S-3 registration statement under the Securities Act covering all Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Sections 2.1(c) and 2.3.

(c) Notwithstanding the foregoing obligations, if the Company furnishes to Holders requesting a registration pursuant to this Section 2.1 a certificate signed by the Company's chief executive officer stating that in the good faith judgment of the Board of Directors it would be materially detrimental to the Company and its stockholders for such registration statement to either become effective or remain effective for as long as such registration statement otherwise would be required to remain effective, because such action would (i) materially interfere with a significant acquisition, corporate reorganization, or other similar transaction involving the Company; (ii) require premature disclosure of material information that the Company has a bona fide business purpose for preserving as confidential; or (iii) render the Company unable to comply with requirements under the Securities Act or Exchange Act, then the Company shall have the right to defer taking action with respect to such filing, and any time periods with respect to filing or effectiveness thereof shall be tolled correspondingly, for a period of not more than ninety (90) days after the request of the Initiating Holders is given; provided, however, that the Company may not invoke this right more than once in any twelve (12) month period; and provided further that the Company shall not register any securities for its own account or that of any other stockholder during such ninety (90) day period other than an Excluded Registration.

(d) The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Section 2.1(a)(i) during the period that is one hundred twenty (120) days before the Company's good faith estimate of the date of filing of, and ending on a date that is one hundred eighty (180) days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; (ii) after the Company has effected two registrations pursuant to Section 2.1(a); or (iii) if the Initiating Holders propose to dispose of shares of Registrable Securities that may be immediately registered on Form S-3 pursuant to a request made pursuant to Section 2.1(b). The Company

shall not be obligated to effect, or to take any action to effect, any registration pursuant to Section 2.1(b) (i) during the period that is thirty (30) days before the Company's good faith estimate of the date of filing of, and ending on a date that is ninety (90) days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; or (ii) if the Company has effected two (2) registrations pursuant to Section 2.1(b) within the twelve (12) month period immediately preceding the date of such request. A registration shall not be counted as "effected" for purposes of this Section 2.1(d) until such time as the applicable registration statement has been declared effective by the SEC, unless the Initiating Holders withdraw their request for such registration, elect not to pay the registration expenses therefor, and forfeit their right to one demand registration statement pursuant to Section 2.6, in which case such withdrawn registration statement shall be counted as "effected" for purposes of this Section 2.1(d).

2.2 Company Registration. If the Company proposes to register (including, for this purpose, a registration effected by the Company for stockholders other than the Holders) any of its Common Stock under the Securities Act in connection with the public offering of such securities solely for cash (other than in an Excluded Registration), the Company shall, at such time, promptly give each Holder notice of such registration. Upon the request of each Holder given within twenty (20) days after such notice is given by the Company, the Company shall, subject to the provisions of Section 2.3, cause to be registered all of the Registrable Securities that each such Holder has requested to be included in such registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 2.2 before the effective date of such registration, whether or not any Holder has elected to include Registrable Securities in such registration. The expenses (other than Selling Expenses) of such withdrawn registration shall be borne by the Company in accordance with Section 2.6.

2.3 Underwriting Requirements.

(a) If, pursuant to Section 2.1, the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to Section 2.1, and the Company shall include such information in the Demand Notice. The underwriter(s) will be selected by the Company and shall be reasonably acceptable to a majority in interest of the Initiating Holders. In such event, the right of any Holder to include such Holder's Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided in Section 2.4(e)) enter into an underwriting agreement in customary form with the underwriter(s) selected for such underwriting. Notwithstanding any other provision of this Section 2.3, if the managing underwriter(s) advise(s) the Initiating Holders in writing that marketing factors require a limitation on the number of shares to be underwritten, then the Initiating Holders shall so advise all Holders of Registrable Securities that otherwise would be underwritten pursuant hereto, and the number of Registrable Securities that may be included in the underwriting shall be allocated among such Holders of Registrable Securities, including the Initiating Holders, in proportion (as

nearly as practicable) to the number of Registrable Securities owned by each Holder or in such other proportion as shall mutually be agreed to by all such selling Holders; provided, however, that the number of Registrable Securities held by the Holders to be included in such underwriting shall not be reduced unless all other securities are first entirely excluded from the underwriting. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest one hundred (100) shares.

(b) In connection with any offering involving an underwriting of shares of the Company's capital stock pursuant to Section 2.2, the Company shall not be required to include any of the Holders' Registrable Securities in such underwriting unless the Holders accept the terms of the underwriting as agreed upon between the Company and its underwriters, and then only in such quantity as the underwriters in their sole discretion determine will not jeopardize the success of the offering by the Company. If the total number of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the number of securities to be sold (other than by the Company) that the underwriters in their reasonable discretion determine is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters and the Company in their sole discretion determine will not jeopardize the success of the offering. If the underwriters determine that less than all of the Registrable Securities requested to be registered can be included in such offering, then the Registrable Securities that are included in such offering shall be allocated among the selling Holders in proportion (as nearly as practicable to) the number of Registrable Securities owned by each selling Holder or in such other proportions as shall mutually be agreed to by all such selling Holders. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest one hundred (100) shares. Notwithstanding the foregoing, in no event shall (i) the number of Registrable Securities included in the offering be reduced unless all other securities (other than securities to be sold by the Company) are first entirely excluded from the offering, or (ii) the number of Registrable Securities included in the offering be reduced below thirty percent (30%) of the total number of securities included in such offering, unless such offering is the IPO, in which case the selling Holders may be excluded further if the underwriters make the determination described above and no other stockholder's securities are included in such offering. For purposes of the provision in this Section 2.3(b) concerning apportionment, for any selling Holder that is a partnership, limited liability company, or corporation, the partners, members, retired partners, retired members, stockholders, and Affiliates of such Holder, or the estates and Immediate Family Members of any such partners, retired partners, members, and retired members and any trusts for the benefit of any of the foregoing Persons, shall be deemed to be a single "selling Holder," and any pro rata reduction with respect to such "selling Holder" shall be based upon the aggregate number of Registrable Securities owned by all Persons included in such "selling Holder," as defined in this sentence.

2.4 Obligations of the Company. Whenever required under this Section 2 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its commercially reasonable efforts to cause such registration statement to become effective and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to one hundred twenty (120) days or, if earlier, until the distribution contemplated in the registration statement has been completed; provided, however, that (i) such one hundred twenty (120) day period shall be extended for a period of time equal to the period the Holder refrains, at the request of an underwriter of Common Stock (or other securities) of the Company, from selling any securities included in such registration, and (ii) in the case of any registration of Registrable Securities on Form S-3 that are intended to be offered on a continuous or delayed basis, subject to compliance with applicable SEC rules, such one hundred twenty (120) day period shall be extended for up to one hundred eighty (180) days, if necessary, to keep the registration statement effective until all such Registrable Securities are sold;

(b) prepare and file with the SEC such amendments and supplements to such registration statement, and the prospectus used in connection with such registration statement, as may be necessary to comply with the Securities Act in order to enable the disposition of all securities covered by such registration statement;

(c) furnish to the selling Holders such numbers of copies of a prospectus, including a preliminary prospectus, as required by the Securities Act, and such other documents as the Holders may reasonably request in order to facilitate their disposition of their Registrable Securities;

(d) use its commercially reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or blue-sky laws of such jurisdictions as shall be reasonably requested by the selling Holders; provided that the Company shall not be required to qualify to do business or to file a general consent to service of process in any such states or jurisdictions, unless the Company is already subject to service in such jurisdiction and except as may be required by the Securities Act;

(e) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriter(s) of such offering;

(f) use its commercially reasonable efforts to cause all such Registrable Securities covered by such registration statement to be listed on a national securities exchange or trading system and each securities exchange and trading system (if any) on which similar securities issued by the Company are then listed;

(g) provide a transfer agent and registrar for all Registrable Securities registered pursuant to this Agreement and provide a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration;

(h) promptly make available for inspection by the selling Holders, any managing underwriter(s) participating in any disposition pursuant to such registration statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the

selling Holders, all financial and other records, pertinent corporate documents, and properties of the Company, and cause the Company's officers, directors, employees, and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant, or agent, in each case, as necessary or advisable to verify the accuracy of the information in such registration statement and to conduct appropriate due diligence in connection therewith;

(i) notify each selling Holder, promptly after the Company receives notice thereof, of the time when such registration statement has been declared effective or a supplement to any prospectus forming a part of such registration statement has been filed; and

(j) after such registration statement becomes effective, notify each selling Holder of any request by the SEC that the Company amend or supplement such registration statement or prospectus.

In addition, the Company shall ensure that, at all times after any registration statement covering a public offering of securities of the Company under the Securities Act shall have become effective, its insider trading policy shall provide that the Company's directors may implement a trading program under Rule 10b5-1 of the Exchange Act.

2.5 Furnish Information. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 2 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as is reasonably required to effect the registration of such Holder's Registrable Securities.

2.6 Expenses of Registration. All expenses (other than Selling Expenses) incurred in connection with registrations, filings, or qualifications pursuant to Section 2, including all registration, filing, and qualification fees; printers' and accounting fees; fees and disbursements of counsel for the Company; and the reasonable fees and disbursements, not to exceed \$50,000, of one counsel for the selling Holders ("**Selling Holder Counsel**"), shall be borne and paid by the Company; provided, however, that the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Section 2.1 if the registration request is subsequently withdrawn at the request of the Holders of a majority of the Registrable Securities to be registered (in which case all selling Holders shall bear such expenses pro rata based upon the number of Registrable Securities that were to be included in the withdrawn registration), unless the Holders of a majority of the Registrable Securities agree to forfeit their right to one registration pursuant to Sections 2.1(a) or 2.1(b), as the case may be; provided further that if, at the time of such withdrawal, the Holders shall have learned of a material adverse change in the condition, business, or prospects of the Company from that known to the Holders at the time of their request and have withdrawn the request with reasonable promptness after learning of such material adverse change, then the Holders shall not be required to pay any of such expenses and shall not forfeit their right to one registration pursuant to Subsections 2.1(a) or 2.1(b). All Selling Expenses relating to Registrable Securities registered pursuant to this Section 2 shall be borne and paid by the Holders pro rata on the basis of the number of Registrable Securities registered on their behalf.

2.7 Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any registration pursuant to this Agreement as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

2.8 Indemnification. If any Registrable Securities are included in a registration statement under this Section 2:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each selling Holder, and the partners, members, officers, directors, and stockholders of each such Holder; legal counsel and accountants for each such Holder; any underwriter (as defined in the Securities Act) for each such Holder; and each Person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any Damages, and the Company will pay to each such Holder, underwriter, controlling Person, or other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Section 2.8(a) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable for any Damages to the extent that they arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of any such Holder, underwriter, controlling Person, or other aforementioned Person expressly for use in connection with such registration.

(b) To the extent permitted by law, each selling Holder, severally and not jointly, will indemnify and hold harmless the Company, and each of its directors, each of its officers who has signed the registration statement, each Person (if any), who controls the Company within the meaning of the Securities Act, legal counsel and accountants for the Company, any underwriter (as defined in the Securities Act), any other Holder selling securities in such registration statement, and any controlling Person of any such underwriter or other Holder, against any Damages, in each case only to the extent that such Damages arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of such selling Holder expressly for use in connection with such registration; and each such selling Holder will pay to the Company and each other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Section 2.8(b) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; and provided further that in no event shall the aggregate amounts payable by any Holder by way of indemnity or contribution under Sections 2.8(b) and 2.8(d) exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of fraud or willful misconduct by such Holder.

(c) Promptly after receipt by an indemnified party under this Section 2.8 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification hereunder, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 2.8, give the indemnifying party notice of the commencement thereof. The indemnifying party shall have the right to participate in such action and, to the extent the indemnifying party so desires, participate jointly with any other indemnifying party to which notice has been given, and to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such action. The failure to give notice to the indemnifying party within a reasonable time of the commencement of any such action shall relieve such indemnifying party of any liability to the indemnified party under this Section 2.8, to the extent that such failure materially prejudices the indemnifying party's ability to defend such action. The failure to give notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 2.8.

(d) To provide for just and equitable contribution to joint liability under the Securities Act in any case in which either: (i) any party otherwise entitled to indemnification hereunder makes a claim for indemnification pursuant to this Section 2.8 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case, notwithstanding the fact that this Section 2.8 provides for indemnification in such case, or (ii) contribution under the Securities Act may be required on the part of any party hereto for which indemnification is provided under this Section 2.8, then, and in each such case, such parties will contribute to the aggregate losses, claims, damages, liabilities, or expenses to which they may be subject (after contribution from others) in such proportion as is appropriate to reflect the relative fault of each of the indemnifying party and the indemnified party in connection with the statements, omissions, or other actions that resulted in such loss, claim, damage, liability, or expense, as well as to reflect any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or allegedly untrue statement of a material fact, or the omission or alleged omission of a material fact, relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission; provided, however, that, in any such case (x) no Holder will be required to contribute any amount in excess of the public offering price of all such Registrable Securities offered and sold by such Holder pursuant to such registration statement, and (y) no Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation; and provided further that in no event shall a Holder's liability pursuant to this Section 2.8(d), when combined with the amounts paid or payable by such Holder pursuant to Section 2.8(b), exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of willful misconduct or fraud by such Holder.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) Unless otherwise superseded by an underwriting agreement entered into in connection with the underwritten public offering, the obligations of the Company and Holders under this Section 2.8 shall survive the completion of any offering of Registrable Securities in a registration under this Section 2, and otherwise shall survive the termination of this Agreement.

2.9 Reports Under Exchange Act. With a view to making available to the Holders the benefits of SEC Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company shall:

(a) make and keep available adequate current public information, as those terms are understood and defined in SEC Rule 144, at all times after the effective date of the registration statement filed by the Company for the IPO;

(b) use commercially reasonable efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (at any time after the Company has become subject to such reporting requirements); and

(c) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) to the extent accurate, a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144 (at any time after ninety (90) days after the effective date of the registration statement filed by the Company for the IPO), the Securities Act, and the Exchange Act (at any time after the Company has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after the Company so qualifies); and (ii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration (at any time after the Company has become subject to the reporting requirements under the Exchange Act) or pursuant to Form S-3 (at any time after the Company so qualifies to use such form).

2.10 Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of a majority of the Registrable Securities then outstanding, enter into any agreement with any holder or prospective holder of any securities of the Company that (i) would provide to such holder the right to include securities in any registration on other than either a pro rata basis with respect to the Registrable Securities or on a subordinate basis after all Holders have had the opportunity to include in the registration and offering all shares of Registrable Securities that they wish to so include; or (ii) allow such holder or prospective holder to initiate a demand for registration of any securities held by such holder or prospective holder; provided that this limitation shall not apply to any additional Investor who becomes a party to this Agreement in accordance with Section 6.9.

2.11 “Market Stand-off” Agreement. Each Holder hereby agrees that it will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the registration by the Company of shares of its Common Stock or any other equity securities under the Securities Act for its IPO and ending on the date specified by the Company and the managing underwriter (such period not to exceed one hundred eighty (180) days), (i) lend; offer; pledge; sell; contract to sell; sell any option or contract to purchase; purchase any option or contract to sell; grant any option, right, or warrant to purchase; or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable (directly or indirectly) for Common Stock (whether such shares or any such securities are then owned by the Holder or are thereafter acquired) or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of such securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash, or otherwise. The foregoing provisions of this Section 2.11 shall apply only to the IPO, shall not apply to the sale of any shares to an underwriter pursuant to an underwriting agreement, or the transfer of any shares to any trust for the direct or indirect benefit of the Holder or the immediate family of the Holder, provided that the trustee of the trust agrees to be bound in writing by the restrictions set forth herein, and provided further that any such transfer shall not involve a disposition for value, and shall be applicable to the Holders only if all officers, directors and holders of one percent (1%) or more of the Company’s outstanding Common Stock (after giving effect to conversion into Common Stock of all outstanding Preferred Stock) are subject to substantially the same restrictions. The underwriters in connection with such registration are intended third-party beneficiaries of this Section 2.11 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto. Each Holder further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Section 2.11 or that are necessary to give further effect thereto. Subject to customary shareholding thresholds and other customary exceptions, any discretionary waiver or termination of the restrictions of any or all of such agreements by the Company or the underwriters shall apply pro rata to all Holders subject to such agreements, based on the number of shares subject to such agreements.

2.12 Restrictions on Transfer.

(a) The Preferred Stock and the Registrable Securities shall not be sold, pledged, or otherwise transferred, and the Company shall not recognize and shall issue stop-transfer instructions to its transfer agent with respect to any such sale, pledge, or transfer, except upon the conditions specified in this Agreement, which conditions are intended to ensure compliance with the provisions of the Securities Act. A transferring Holder will cause any proposed purchaser, pledgee, or transferee of the Preferred Stock and the Registrable Securities held by such Holder to agree to take and hold such securities subject to the provisions and upon the conditions specified in this Agreement.

(b) Each certificate, instrument, or book entry representing (i) the Preferred Stock, (ii) the Registrable Securities, and (iii) any other securities issued in respect of the securities referenced in clauses (i) and (ii), upon any stock split, stock dividend, recapitalization, merger, consolidation, or similar event, shall (unless otherwise permitted by the provisions of Section 2.12(c)) be notated with a legend substantially in the following form:

THE SECURITIES REPRESENTED HEREBY HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. SUCH SHARES MAY NOT BE SOLD, PLEDGED, OR TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR A VALID EXEMPTION FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF SAID ACT.

THE SECURITIES REPRESENTED HEREBY MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

The Holders consent to the Company making a notation in its records and giving instructions to any transfer agent of the Restricted Securities in order to implement the restrictions on transfer set forth in this Section 2.12.

(c) The holder of such Restricted Securities, by acceptance of ownership thereof, agrees to comply in all respects with the provisions of this Section 2. Before any proposed sale, pledge, or transfer of any Restricted Securities, unless there is in effect a registration statement under the Securities Act covering the proposed transaction, the Holder thereof shall give notice to the Company of such Holder's intention to effect such sale, pledge, or transfer. Each such notice shall describe the manner and circumstances of the proposed sale, pledge, or transfer in sufficient detail and, if reasonably requested by the Company, shall be accompanied at such Holder's expense by either (i) a written opinion of legal counsel who shall, and whose legal opinion shall, be reasonably satisfactory to the Company, addressed to the Company, to the effect that the proposed transaction may be effected without registration under the Securities Act; (ii) a "no action" letter from the SEC to the effect that the proposed sale, pledge, or transfer of such Restricted Securities without registration will not result in a recommendation by the staff of the SEC that action be taken with respect thereto; or (iii) any other evidence reasonably satisfactory to counsel to the Company to the effect that the proposed sale, pledge, or transfer of the Restricted Securities may be effected without registration under the Securities Act, whereupon the Holder of such Restricted Securities shall be entitled to sell, pledge, or transfer such Restricted Securities in accordance with the terms of the notice given by the Holder to the Company. The Company will not require such a legal opinion or "no action" letter (x) in any transaction in compliance with SEC Rule 144; or (y) in any transaction in which such Holder distributes Restricted Securities to an Affiliate of such Holder for no consideration; provided that each transferee agrees in writing to be subject to the terms of this Section 2.12. Each certificate, instrument, or book entry representing the Restricted Securities transferred as above provided shall be notated with, except if such transfer is made pursuant to SEC Rule 144, the appropriate restrictive legend set forth in Section 2.12(b), except that such certificate instrument, or book entry shall not be notated with such restrictive legend if, in the opinion of counsel for such Holder and the Company, such legend is not required in order to establish compliance with any provisions of the Securities Act.

2.13 Termination of Registration Rights. The right of any Holder to request registration or inclusion of Registrable Securities in any registration pursuant to Sections 2.1 or 2.2 shall terminate upon the earliest to occur of:

(a) the closing of a Deemed Liquidation Event described in Article Fourth, Part B, Section 2.3.1(a) of the Restated Certificate;

(b) with respect to a Holder, such time after the IPO when such Holder (X) can sell all shares held by it (together with any Affiliate of the Holder with whom such Holder must aggregate its sales under Rule 144) in compliance with Rule 144(b)(1)(i) or (Y) holds one percent (1%) or less of the Company's outstanding Common Stock and all Registrable Securities of the Company issuable or issued upon conversion of the Shares held by and issuable to such Holder (together with any Affiliate of the Holder with whom such Holder must aggregate its sales under Rule 144) may be sold pursuant to Rule 144 without limitation during a three-month period without registration; and

(c) the third anniversary of the IPO.

3. Information and Observer Rights.

3.1 Delivery of Financial Statements. The Company shall deliver to each Major Investor, provided that the Board of Directors has not reasonably determined that such Major Investor is a competitor of the Company (it being understood, acknowledged and agreed that for all purposes under this Agreement (including Sections 3.2 and 3.4), none of the following entities shall be deemed to be a "competitor" of the Company: (i) any financial investment firm or collective investment vehicle solely by virtue of its ownership (and/or its Affiliates' ownership) of an equity interest in any competitor held solely for investment purposes, or (ii) GV 2017, L.P. or any of its affiliated funds, solely as a result of any affiliation between such fund and Alphabet Inc. (including any Affiliate of Alphabet Inc.)):

(a) as soon as practicable, but in any event within one hundred twenty (120) days after the end of each fiscal year of the Company (i) a balance sheet as of the end of such year, (ii) statements of income and of cash flows for such year, and (iii) a statement of stockholders' equity as of the end of such year, all such financial statements audited and certified by independent public accountants selected by the Company;

(b) as soon as practicable, but in any event within forty-five (45) days after the end of each fiscal quarter of each fiscal year of the Company, unaudited statements of income and cash flows for such fiscal quarter, and an unaudited balance sheet as of the end of such fiscal quarter, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to normal year-end audit adjustments; and (ii) not contain all notes thereto that may be required in accordance with GAAP);

(c) as soon as practicable, but in any event within thirty (30) days after the end of each month, unaudited statements of income and cash flows for such month, and an unaudited balance sheet as of the end of such month, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to normal year-end audit adjustments; and (ii) not contain all notes thereto that may be required in accordance with GAAP);

(d) as soon as practicable, but in any event within (30) days after the end of each fiscal year, or reasonably promptly following a written request by a Major Investor, a statement showing the number of shares of each class and series of capital stock and securities convertible into or exercisable for shares of capital stock outstanding at the end of the period, the Common Stock issuable upon conversion or exercise of any outstanding securities convertible or exercisable for Common Stock and the exchange ratio or exercise price applicable thereto, and the number of shares of issued stock options and stock options not yet issued but reserved for issuance, if any, all in sufficient detail as to permit the Major Investors to calculate their respective percentage equity ownership in the Company;

(e) as soon as practicable, but in any event thirty (30) days before the end of each fiscal year, a budget and business plan for the next fiscal year (collectively, the “**Budget**”), prepared on a monthly basis, including balance sheets, income statements, and statements of cash flow for such months and, promptly after prepared, any other budgets or revised budgets prepared by the Company;

(f) such other information relating to the financial condition, capitalization, business, prospects, or corporate affairs of the Company as any Major Investor may from time to time reasonably request; provided, however, that the Company shall not be obligated under this Section 3.1 to provide information (i) that the Company reasonably determines in good faith to be a trade secret or highly confidential proprietary information (unless covered by an enforceable confidentiality agreement, in a form acceptable to the Company); or (ii) the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

If, for any period, the Company has any subsidiary whose accounts are consolidated with those of the Company, then in respect of such period the financial statements delivered pursuant to the foregoing sections shall be the consolidated and consolidating financial statements of the Company and all such consolidated subsidiaries.

Notwithstanding anything else in this Section 3.1 to the contrary, the Company may cease providing the information set forth in this Section 3.1 during the period starting with the date sixty (60) days before the Company’s good-faith estimate of the date of filing of a registration statement if it must do so to comply with the SEC rules applicable to such registration statement and related offering; provided that the Company’s covenants under this Section 3.1 shall be reinstated at such time as the Company is no longer actively employing its commercially reasonable efforts to cause such registration statement to become effective.

3.2 Inspection. The Company shall permit each Major Investor (provided that the Board of Directors has not reasonably determined that such Major Investor is a competitor of the Company), at such Major Investor’s expense, to visit and inspect the Company’s properties; examine its books of account and records; and discuss the Company’s affairs, finances, and accounts with its officers, during normal business hours of the Company as

may be reasonably requested by the Major Investor; provided, however, that the Company shall not be obligated pursuant to this Section 3.2 to provide access to any information that it reasonably and in good faith considers to be a trade secret or highly confidential proprietary information (unless covered by an enforceable confidentiality agreement, in form acceptable to the Company) or the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

3.3 Termination of Information Rights. The covenants set forth in Section 3.1 and Section 3.2 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon a Deemed Liquidation Event described in Article Fourth, Part B, Section 2.3.1(a) of the Restated Certificate, whichever event occurs first.

3.4 Confidentiality. Each Investor agrees that such Investor will keep confidential and will not disclose, divulge, or use for any purpose (other than to monitor its investment in the Company) any confidential information obtained from the Company pursuant to the terms of this Agreement (including notice of the Company's intention to file a registration statement), unless such confidential information (a) is known or becomes known to the public in general (other than as a result of a breach of this Section 3.4 by such Investor), (b) is or has been independently developed or conceived by the Investor without use of the Company's confidential information, or (c) is or has been made known or disclosed to the Investor by a third party without a breach of any obligation of confidentiality such third party may have to the Company; provided, however, that an Investor may disclose confidential information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with monitoring its investment in the Company; (ii) to any prospective purchaser of any Registrable Securities from such Investor, if such prospective purchaser agrees to be bound by the provisions of this Section 3.4 and is not a competitor of the Company; (iii) to any existing Affiliate, partner, member, stockholder, or wholly owned subsidiary of such Investor in the ordinary course of business, provided that such Investor informs such Person that such information is confidential and directs such Person to maintain the confidentiality of such information; or (iv) as may otherwise be required by law, provided that the Investor promptly notifies the Company of such disclosure and takes reasonable steps to minimize the extent of any such required disclosure.

4. Rights to Future Stock Issuances.

4.1 Right of First Offer. Subject to the terms and conditions of this Section 4.1 and applicable securities laws, if the Company proposes to offer or sell any New Securities, the Company shall first offer such New Securities to each Major Investor. A Major Investor shall be entitled to apportion the right of first offer hereby granted to it, in such proportions as it deems appropriate, among itself and its Affiliates.

(a) The Company shall give notice (the "**Offer Notice**") to each Major Investor, stating (i) its bona fide intention to offer such New Securities, (ii) the number of such New Securities to be offered, and (iii) the price and terms, if any, upon which it proposes to offer such New Securities.

(b) By notification to the Company within twenty (20) days after the Offer Notice is given, each Major Investor may elect to purchase or otherwise acquire, at the price and on the terms specified in the Offer Notice, up to that portion of such New Securities which equals the proportion that the Common Stock then held by such Major Investor (including all shares of Common Stock then issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held by such Major Investor) bears to the total Common Stock of the Company then outstanding (assuming full conversion and/or exercise, as applicable, of all Preferred Stock and other Derivative Securities). At the expiration of such twenty (20) day period, the Company shall promptly notify each Major Investor that elects to purchase or acquire all the shares available to it (each, a “**Fully Exercising Investor**”) of any other Major Investor’s failure to do likewise. During the ten (10) day period commencing after the Company has given such notice, each Fully Exercising Investor may, by giving notice to the Company, elect to purchase or acquire, in addition to the number of shares specified above, up to that portion of the New Securities for which Major Investors were entitled to subscribe but that were not subscribed for by the Major Investors which is equal to the proportion that the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of Preferred Stock and any other Derivative Securities then held, by such Fully Exercising Investor bears to the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held, by all Fully Exercising Investors who wish to purchase such unsubscribed shares. The closing of any sale pursuant to this Section 4.1(b) shall occur within the later of one hundred and twenty (120) days of the date that the Offer Notice is given and the date of initial sale of New Securities pursuant to Section 4.1(c).

(c) If all New Securities referred to in the Offer Notice are not elected to be purchased or acquired as provided in Section 4.1(b), the Company may, during the one hundred twenty (120) day period following the expiration of the periods provided in Section 4.1(b), offer and sell the remaining unsubscribed portion of such New Securities to any Person or Persons at a price not less than, and upon terms no more favorable to the offeree than, those specified in the Offer Notice. If the Company does not enter into an agreement for the sale of the New Securities within such period, or if such agreement is not consummated within thirty (30) days of the execution thereof, the right provided hereunder shall be deemed to be revived and such New Securities shall not be offered unless first reoffered to the Major Investors in accordance with this Section 4.1.

(d) The right of first offer in this Section 4.1 shall not be applicable to (i) Exempted Securities (as defined in the Restated Certificate); (ii) shares of Common Stock issued in the IPO; and (iii) the issuance of shares of Series C Preferred Stock to pursuant to the Purchase Agreement.

4.2 Termination. The covenants set forth in Section 4.1 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, or (ii) upon a Deemed Liquidation Event described in Article Fourth, Part B, Section 2.3.1(a) of the Restated Certificate, whichever event occurs first.

5. Additional Covenants.

5.1 Insurance. The Company shall maintain, from financially sound and reputable insurers, Directors and Officers liability insurance and term “key-person” insurance on Andrew Allen, each in an amount and on terms and conditions satisfactory to the Board of Directors, until such time as the Board of Directors determines that such insurance should be discontinued. The key-person policy shall name the Company as loss payee, and neither policy shall be cancelable by the Company without prior approval by the Board of Directors, including a majority of the then-serving Preferred Directors.

5.2 Employee Agreements. The Company will cause each person now or hereafter employed by it or by any subsidiary (or engaged by the Company or any subsidiary as a consultant/independent contractor) to enter into a nondisclosure and proprietary rights assignment agreement. In addition, the Company shall not amend, modify, terminate, waive, or otherwise alter, in whole or in part, any of the above-referenced agreements or any restricted stock agreement between the Company and any employee, without the consent of the Board of Directors.

5.3 Employee Stock. Unless otherwise approved by the Board of Directors, all future employees and consultants of the Company who purchase, receive options to purchase, or receive awards of shares of the Company’s capital stock after the date hereof shall be required to execute restricted stock or option agreements, as applicable, providing for (i) vesting of shares over a four (4) year period, with the first twenty-five percent (25%) of such shares vesting following twelve (12) months of continued employment or service, and the remaining shares vesting in equal monthly installments over the following thirty-six (36) months, and (ii) a market stand-off provision substantially similar to that in Section 2.11. In addition, unless otherwise approved by the Board of Directors, the Company shall retain a “right of first refusal” on employee transfers until the IPO and shall have the right to repurchase unvested shares at cost upon termination of employment of a holder of restricted stock.

5.4 Qualified Small Business Stock. The Company shall use commercially reasonable efforts to cause the shares of Series A Preferred Stock issued pursuant to that certain Series A Preferred Stock Purchase Agreement, dated September 18, 2015 (the “**Series A Purchase Agreement**”) in the First Tranche Closing (as defined in the Series A Purchase Agreement), as well as any shares into which such shares are converted, within the meaning of Section 1202(f) of the Internal Revenue Code (the “**Code**”), to constitute “qualified small business stock” as defined in Section 1202(c) of the Code; provided, however, that such requirement shall not be applicable if the Board of Directors determines, in its good-faith business judgment, that such qualification is inconsistent with the best interests of the Company. The Company shall submit to its stockholders (including the Investors) and to the Internal Revenue Service any reports that may be required under Section 1202(d)(1)(C) of the Code and the regulations promulgated thereunder. In addition, within twenty (20) business days after any Investor’s written request therefor, the Company shall, at its option, either (i) deliver to such Investor a written statement indicating whether (and what portion of) such Investor’s interest in the Company constitutes “qualified small business stock” as defined in Section 1202(c) of the Code or (ii) deliver to such Investor such factual information in the Company’s possession as is reasonably necessary to enable such Investor to determine whether (and what portion of) such Investor’s interest in the Company constitutes “qualified small business stock” as defined in Section 1202(c) of the Code.

5.5 Successor Indemnification. If the Company or any of its successors or assignees consolidates with or merges into any other Person and is not the continuing or surviving corporation or entity of such consolidation or merger, then to the extent necessary, proper provision shall be made so that the successors and assignees of the Company assume the obligations of the Company with respect to indemnification of members of the Board of Directors as in effect immediately before such transaction, whether such obligations are contained in the Company's Bylaws, its Restated Certificate, or elsewhere, as the case may be.

5.5 Director Expense Reimbursement. The Company shall promptly reimburse each non-employee director of the Company for all of his or her reasonable and actual out-of-pocket expenses (including travel expenses) incurred in attending each meeting of the Board of Directors or a committee thereof or otherwise incurred in the course of performing his or her duties as a director of the Company, subject at all times to the Company's standard travel and reimbursement policies.

5.6 FCPA. The Company shall not (and shall not permit any of its subsidiaries or affiliates or any of its or their respective directors, officers, managers, employees, independent contractors, representatives or agents to) promise, authorize or make any payment to, or otherwise contribute any item of value to, directly or indirectly, to any third party, including any Non-U.S. Official (as such term is defined in the U.S. Foreign Corrupt Practices Act of 1977, as amended (the "FCPA")), in each case, in violation of the FCPA, the U.K. Bribery Act, or any other applicable anti-bribery or anti-corruption law. The Company shall (and shall cause each of its subsidiaries and affiliates to) cease all of its or their respective activities, as well as remediate any actions taken by the Company, its subsidiaries or affiliates, or any of their respective directors, officers, managers, employees, independent contractors, representatives or agents in violation of the FCPA, the U.K. Bribery Act, or any other applicable anti-bribery or anti-corruption law. The Company shall (and shall cause each of its subsidiaries and affiliates to) maintain systems of internal controls (including, but not limited to, accounting systems, purchasing systems and billing systems) to ensure compliance with the FCPA, the U.K. Bribery Act, or any other applicable anti-bribery or anti-corruption law. Upon request, the Company agrees to provide responsive information and/or certifications concerning its compliance with applicable anti-corruption laws. The Company shall promptly notify each Investor if the Company becomes aware of any Enforcement Action (as defined in the Purchase Agreement). The Company shall, and shall cause any direct or indirect subsidiary or entity controlled by it, whether now in existence or formed in the future, to comply with the FCPA. The Company shall use its best efforts to cause any direct or indirect subsidiary, whether now in existence or formed in the future, to comply in all material respects with all applicable laws.

5.7 Termination of Covenants. The covenants set forth in this Section 5, except for Section 5.5, shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, or (ii) upon a Deemed Liquidation Event described in Article Fourth, Part B, Section 2.3.1(a) of the Restated Certificate, whichever event occurs first.

6. Miscellaneous.

6.1 Successors and Assigns. The rights under this Agreement may be assigned (but only with all related obligations) by a Holder to a transferee of Registrable Securities that (i) is an Affiliate of a Holder; (ii) is a Holder's Immediate Family Member or trust for the benefit of an individual Holder or one or more of such Holder's Immediate Family Members; or (iii) after such transfer, holds at least 1,000,000 shares of Registrable Securities (subject to appropriate adjustment for stock splits, stock dividends, combinations, and other recapitalizations); provided, however, that (x) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee and the Registrable Securities with respect to which such rights are being transferred; and (y) such transferee agrees in a written instrument delivered to the Company to be bound by and subject to the terms and conditions of this Agreement, including the provisions of Section 2.11. For the purposes of determining the number of shares of Registrable Securities held by a transferee, the holdings of a transferee (1) that is an Affiliate or stockholder of a Holder; (2) who is a Holder's Immediate Family Member; or (3) that is a trust for the benefit of an individual Holder or such Holder's Immediate Family Member shall be aggregated together and with those of the transferring Holder; provided further that all transferees who would not qualify individually for assignment of rights shall have a single attorney-in-fact for the purpose of exercising any rights, receiving notices, or taking any action under this Agreement. The terms and conditions of this Agreement inure to the benefit of and are binding upon the respective successors and permitted assignees of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assignees any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

6.2 Governing Law. This Agreement shall be governed by the internal law of the State of California.

6.3 Counterparts. This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *e.g.*, www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

6.4 Titles and Subtitles. The titles and subtitles used in this Agreement are for convenience only and are not to be considered in construing or interpreting this Agreement.

6.5 Notices. All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given upon the earlier of actual receipt or (i) personal delivery to the party to be notified; (ii) when sent, if sent by electronic mail or facsimile during the recipient's normal business hours, and if not sent during normal business hours, then on the recipient's next business day; (iii) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid; or (iv) one (1) business day after the business day of deposit with a nationally recognized overnight

courier, freight prepaid, specifying next-day delivery, with written verification of receipt. All communications shall be sent to the respective parties at their addresses as set forth on Schedule A hereto, or to the principal office of the Company and to the attention of the Chief Executive Officer, in the case of the Company, or to such email address, facsimile number, or address as subsequently modified by written notice given in accordance with this Section 6.5. If notice is given to the Company, a copy shall also be sent to (which shall not constitute notice): Latham & Watkins LLP, 140 Scott Drive, Menlo Park, California 94025 Attn: Alan C. Mendelson, Esq. and Brian J. Cuneo, Esq. (facsimile: (650) 463-2600; email: alan.mendelson@lw.com and brian.cuneo@lw.com).

6.6 Amendments and Waivers. Any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance, and either retroactively or prospectively) only with the written consent of the Company and the holders of at least a majority of the shares constituting Registrable Securities then outstanding; provided that the Company may in its sole discretion waive compliance with Section 2.12(c) (and the Company's failure to object promptly in writing after notification of a proposed assignment allegedly in violation of Section 2.12(c) shall be deemed to be a waiver); and provided further that any provision hereof may be waived by any waiving party on such party's own behalf, without the consent of any other party. Notwithstanding the foregoing, this Agreement may not be amended or terminated and the observance of any term hereof may not be waived with respect to any Investor without the written consent of such Investor, unless such amendment, termination, or waiver applies to all Investors in the same fashion (it being agreed that a waiver of the provisions of Section 4 with respect to a particular transaction shall be deemed to apply to all Investors in the same fashion if such waiver does so by its terms, notwithstanding the fact that certain Investors may nonetheless, by agreement with the Company, purchase securities in such transaction); provided that in the event of a waiver of Section 4 by the Major Investors with respect to the issuance of New Securities, to the extent that any Major Investor nonetheless purchases New Securities in the transaction that gave rise to such waiver (any such Major Investor, a "**Participating Investor**"), then each other Major Investor shall be permitted to purchase up to the same percentage (not to exceed 100%) of its pro rata share of New Securities issued in the transaction as the percentage of the pro rata share of the New Securities so purchased by the Participating Investor purchasing the largest portion of such Participating Investor's pro rata share in the transaction); provided further that the foregoing right may be waived individually by any Major Investor. The Company shall give prompt notice of any amendment or termination hereof or waiver hereunder to any party hereto that did not consent in writing to such amendment, termination, or waiver. Any amendment, termination, or waiver effected in accordance with this Section 6.6 shall be binding on all parties hereto, regardless of whether any such party has consented thereto. No waivers of or exceptions to any term, condition, or provision of this Agreement, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such term, condition, or provision.

6.7 Severability. In case any one or more of the provisions contained in this Agreement is for any reason held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of this Agreement, and such invalid, illegal, or unenforceable provision shall be reformed and construed so that it will be valid, legal, and enforceable to the maximum extent permitted by law.

6.8 Aggregation of Stock. All shares of Registrable Securities held or acquired by Affiliates shall be aggregated together for the purpose of determining the availability of any rights under this Agreement and such Affiliated persons may apportion such rights as among themselves in any manner they deem appropriate.

6.9 Additional Investors. Notwithstanding anything to the contrary contained herein, if the Company issues additional shares of Series C Preferred Stock after the date hereof, whether pursuant to the Purchase Agreement or otherwise, any purchaser of such shares of Series C Preferred Stock may become a party to this Agreement by executing and delivering an additional counterpart signature page to this Agreement, and thereafter shall be deemed an "Investor" for all purposes hereunder. No action or consent by the Investors shall be required for such joinder to this Agreement by such additional Investor, so long as such additional Investor has agreed in writing to be bound by all of the obligations as an "Investor" hereunder.

6.10 Entire Agreement. This Agreement (including any Schedules and Exhibits hereto) constitutes the full and entire understanding and agreement among the parties with respect to the subject matter hereof, and any other written or oral agreement relating to the subject matter hereof existing between the parties is expressly canceled. Upon the effectiveness of this Agreement, the Prior Agreement shall be deemed amended and restated and superseded in its entirety by this Agreement, and shall be of no further force or effect.

6.11 Dispute Resolution. The parties (a) hereby irrevocably and unconditionally submit to the jurisdiction of the state courts of California and to the jurisdiction of the United States District Court for the District of Northern District for the purpose of any suit, action or other proceeding arising out of or based upon this Agreement, (b) agree not to commence any suit, action or other proceeding arising out of or based upon this Agreement except in the state courts of California or the United States District Court for the District of Northern California, and (c) hereby waive, and agree not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above-named courts, that its property is exempt or immune from attachment or execution, that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court.

WAIVER OF JURY TRIAL: EACH PARTY HEREBY WAIVES ITS RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT, THE OTHER TRANSACTION DOCUMENTS, THE SECURITIES OR THE SUBJECT MATTER HEREOF OR THEREOF. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL-ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS TRANSACTION, INCLUDING, WITHOUT LIMITATION, CONTRACT CLAIMS, TORT CLAIMS (INCLUDING NEGLIGENCE), BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. THIS SECTION HAS BEEN FULLY DISCUSSED BY EACH OF THE PARTIES HERETO AND THESE PROVISIONS WILL NOT BE SUBJECT TO ANY EXCEPTIONS. EACH PARTY HERETO HEREBY FURTHER WARRANTS AND REPRESENTS THAT SUCH PARTY HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL, AND THAT SUCH PARTY KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

The prevailing party shall be entitled to reasonable attorney's fees, costs, and necessary disbursements in addition to any other relief to which such party may be entitled. Each of the parties to this Agreement consents to personal jurisdiction for any equitable action sought in the U.S. District Court for the District of Northern California or any court of the State of California having subject matter jurisdiction.

6.12 Delays or Omissions. No delay or omission to exercise any right, power, or remedy accruing to any party under this Agreement, upon any breach or default of any other party under this Agreement, shall impair any such right, power, or remedy of such nonbreaching or nondefaulting party, nor shall it be construed to be a waiver of or acquiescence to any such breach or default, or to any similar breach or default thereafter occurring, nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. All remedies, whether under this Agreement or by law or otherwise afforded to any party, shall be cumulative and not alternative.

6.13 Acknowledgment. The Company acknowledges that the Investors are in the business of venture capital investing and therefore review the business plans and related proprietary information of many enterprises, including enterprises which may have products or services which compete directly or indirectly with those of the Company. Nothing in this Agreement shall preclude or in any way restrict the Investors from investing or participating in any particular enterprise whether or not such enterprise has products or services which compete with those of the Company.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

THE COMPANY:

GRITSTONE ONCOLOGY, INC.

By: /s/ Andrew Allen

Name: Andrew Allen

Title: President and Chief Executive Officer

**SIGNATURE PAGE TO
AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT OF
GRITSTONE ONCOLOGY, INC.**

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

**ALTITUDE LIFE SCIENCE VENTURES
FUND II, L.P.**

By: /s/ David Maki

Name: David Maki

Title: Managing Member

**ALTITUDE LIFE SCIENCE VENTURES SIDE FUND II,
L.P.**

By: /s/ David Maki

Name: David Maki

Title: Managing Member

Address: 1014 Market Street, Suite 200
Kirkland, WA 98033

**SIGNATURE PAGE TO
AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT OF
GRITSTONE ONCOLOGY, INC.**

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

Clarus Lifesciences III, L.P.

By: Clarus Ventures III GP, LP,
it's General Partner

By: Clarus Ventures III, LLC,
it's General Partner

By: /s/ Nick Simon

Name: Nick Simon

Title: Managing Director

**SIGNATURE PAGE TO
AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT OF
GRITSTONE ONCOLOGY, INC.**

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTORS:

The Column Group II, LP

By: The Column Group II GP, LP
Its: General Partner

By: The Column Group, LLC
Its: General Partner

By: /s/ Peter Svenilson
Name: Peter Svenilson
Title: Managing Partner

**SIGNATURE PAGE TO
AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT OF
GRITSTONE ONCOLOGY, INC.**

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

Frazier Healthcare VII, L.P.

By: FHM VII, LP, its general partner
By: FHM VII, LLC, its general partner

By: /s/ James Topper
James Topper, Managing General Partner

Frazier Healthcare VII-A, L.P.

By: FHM VII, LP, its general partner
By: FHM VII, LLC, its general partner

By: /s/ James Topper
James Topper, Managing General Partner

**SIGNATURE PAGE TO
AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT OF
GRITSTONE ONCOLOGY, INC.**

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

LAV Auspiciam Limited

By: /s/ Judith Li

Name: Judith Li

Title: Authorized Signatory

LAV Aria Limited

By: /s/ Judith Li

Name: Judith Li

Title: Authorized Signatory

LAV Zenith Limited

By: /s/ Judith Li

Name: Judith Li

Title: Authorized Signatory

**SIGNATURE PAGE TO
AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT OF
GRITSTONE ONCOLOGY, INC.**

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

Marshfield Advisers, LLC

By: /s/ Scott Carman

Name: Scott Carman

Title: Portfolio Manager

**SIGNATURE PAGE TO
AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT OF
GRITSTONE ONCOLOGY, INC.**

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

PFM Healthcare Master Fund, L.P.

By: Partner Fund Management, L.P.
its investment adviser

By: /s/ Yuan DuBord

Name: Yuan DuBord

Title: CFO

PFM Healthcare Principals Fund, L.P.

By: Partner Investment Management, L.P.
its investment adviser

By: /s/ Yuan DuBord

Name: Yuan DuBord

Title: CFO

PFM Healthcare Emerging Growth Master Fund, L.P.

By: Partner Fund Management, L.P.
its investment adviser

By: /s/ Yuan DuBord

Name: Yuan DuBord

Title: CFO

**SIGNATURE PAGE TO
AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT OF
GRITSTONE ONCOLOGY, INC.**

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

Redmile Capital Fund, LP

By: /s/ Jeremy Green
Name: Jeremy Green
Title: Managing Member of the General Partner and the
Investment Manager

Redmile Capital Offshore Fund, Ltd.

By: /s/ Jeremy Green
Name: Jeremy Green
Title: Managing Member of the Investment Manager

Redmile Capital Offshore Fund II, Ltd.

By: /s/ Jeremy Green
Name: Jeremy Green
Title: Managing Member of the Investment Manager

Redmile Strategic Master Fund LP

By: /s/ Jeremy Green
Name: Jeremy Green
Title: Managing Member of the General Partner and Investment
Manager

Redmile Biopharma Investments I, L.P.

By: /s/ Jeremy Green
Name: Jeremy Green
Title: Managing Member of the General Partner and the
Management Company

Address:
One Letterman Drive, Building D, Suite D3-300
San Francisco, CA 94129
Telephone: 415-489-9980
Email: #####
Attn: Josh Garcia

**SIGNATURE PAGE TO
AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT OF
GRITSTONE ONCOLOGY, INC.**

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

INVESTOR:

Versant Venture Capital V, L.P.
Versant Affiliates Fund V, L.P.
Versant Ophthalmic Affiliates Fund I, L.P.
By: Versant Ventures V, LLC
Its: General Partner

By: /s/ Thomas Woiwode

Name: Thomas Woiwode

Title: Managing Director

Versant Venture Capital V (Canada) LP
By: Versant Ventures V (Canada), L.P.
By: Versant Ventures V GP-GP (Canada), Inc.
Its: General Partner

By: /s/ Thomas Woiwode

Name: Thomas Woiwode

Title: Director

SIGNATURE PAGE TO
AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT OF
GRITSTONE ONCOLOGY, INC.

SCHEDULE A

Investors

PFM HEALTHCARE MASTER FUND, L.P.
PFM HEALTHCARE PRINCIPALS FUND, L.P.
PFM HEALTHCARE EMERGING GROWTH MASTER FUND, L.P.
4 Embarcadero Center, Suite 3500
San Francisco, CA 94111
Attn: Darin Sadow
Email: #####

MARSHFIELD ADVISERS, LLC
60 East South Temple Street, Suite 400
Salt Lake City, UT 84111
Attention: Scott Carman

TRINITAS CAPITAL G, L.P.
401, 4/F Building 2, No. 39, Dongzhimenwai Street,
Dongcheng District, Beijing, China
Attn: Bing Han
Email: #####

LAV Auspicium Limited
28 Hennessy Road 6F
Admiralty, Hong Kong
Attn: Judith Li
Email: #####

LAV Aria Limited
28 Hennessy Road 6F
Admiralty, Hong Kong
Attn: Judith Li
Email: #####

LAV Zenith Limited
28 Hennessy Road 6F
Admiralty, Hong Kong
Attn: Judith Li
Email: #####

GV 2017, L.P.
1600 Amphitheatre Parkway
Mountain View, CA 94043
Email: #####

Alexandria Ventures Investments, LLC
385 E. Colorado Blvd., Suite 299
Pasadena, CA 91101
Attn: Christopher Otey
Email: #####; #####

Versant Venture Capital V, L.P.
Versant Affiliates Fund V, L.P.
Versant Ophthalmic Affiliates Fund I, L.P.
Versant Venture Capital V (Canada) LP
One Sansome Street, Suite 3630
San Francisco, CA 94104
Fax: (415) 801-8101
Attn: Tom Woiwode
Email: #####

The Column Group II, LP
1700 Owens Street, Suite 500
San Francisco, CA 94158
Fax: (415) 255-2048
Attn: Peter Svenilson
Email: #####

Clarus Lifesciences III, L.P.
601 Gateway Boulevard, Suite 1270
South San Francisco, CA 94080
Phone: (650) 238-5000
Attn: Nick Simon
Email: #####

Frazier Healthcare VII, L.P.
Frazier Healthcare VII-A, L.P.
610 Union Street, Suite 3200
Seattle, WA 98101
Fax: ### ##-####
Attn: James Topper
Email: #####

Redmile Capital Fund, LP
Redmile Capital Offshore Fund, Ltd.
Redmile Capital Offshore Fund II, Ltd.
Redmile Strategic Master Fund, Ltd.
Redmile Biopharma Investments I, L.P.
One Letterman Drive, Building D, Suite D3-300
The Presidio of San Francisco
San Francisco, CA 94129
Phone: (415) 489-9980
Attn: Josh Garcia

Casdin Partners Master Fund LP

Attn: Matt Ehrhart
1350 Avenue of the Americas, Suite 1140
New York, NY 10019
Phone: (212) 897-5430
Email: #####

Transformational Healthcare Opportunity (LT), LLC

Attn: Darren F. Hite
2384 Union Street
San Francisco, CA 94123
Email: #####

Patrick J. Mahaffy

c/o Clovis Oncology
2525 28th Street, Suite 100
Boulder, CO 80301
Phone: ### ###-####
Email: #####

Atwood-Edminster Trust, dtd 4/2/00

Attn: Brian Atwood

Phone: ### ###-####
Email: #####

Aberdare Management Company, LLC

235 Montgomery Street, Suite 1230
San Francisco, CA 94104
Phone: 415-392-7442
Attn: Paul Klingenstein
Email: #####
Copy to: #####

Robert Nelsen

Phone: ### ###-####
Email: #####

Preston Family Trust

Attn: Heather Preston

Phone: ### ##-####
Email: #####

Jonathan MacQuitty

Email: #####
Phone: ### ##-####

Fred E. Cohen and Carolyn B. Klebanoff Trust

Phone: ### ##-####
Email: #####

Bonderman Family Limited Partnership

Attn: Sherri Conn
301 Commerce Street, Suite 3300
Fort Worth, TX 76102
Phone: ### ##-####
Email: #####

Keith Manchester

Phone: ### ##-####
Email: #####

**Altitude Life Science Ventures Fund II, L.P.
Altitude Life Science Ventures Side Fund II, L.P.**

1014 Market St, Suite 200
Kirkland, WA 98033
Attn: David Maki
Email: #####
Tel: ### ##-####

Roger A. Allen

Phone: #- #-##-###-###
Email: #####

Darshan Moroak

Phone: ### ###-####
Email: #####

Parminder Moroak

Phone: ### ###-####
Email: #####

Opinder Moroak

Phone: ### ###-####
Email: osmoroak@yahoo.com

Dr. Paul Jarman

Phone: ## #-#####-####
Email: #####

Patrick Boggon

Phone: ## #-#####-####
Email: #####

Vladimir & Irina Yelensky

###-####
#####

VP Company Investments 2008, LLC

c/o Latham & Watkins LLP
Attn: Alfred Harutunian
555 West Fifth Street – Suite 800
Los Angeles, CA 90013-1021
Fax: (213) 891-1200
Email: #####

VP Company Investments 2016, LLC

c/o Latham & Watkins LLP
Attn: Alfred Harutunian
555 West Fifth Street – Suite 800
Los Angeles, CA 90013-1021
Fax: (213) 891-1200
Email: #####

Alan C. & Agnes B. Mendelson Family Trust

Fax: ### ##-####
Email: #####

Brian Cuneo

c/o Latham & Watkins LLP
140 Scott Drive
Menlo Park, CA 94025
Fax: (650) 463-2600
Email: #####

Joshua N. Holian

c/o Latham & Watkins LLP
505 Montgomery Street, 20th Floor
San Francisco, CA 94111-6538
Fax: (415) 395-8095
Email: #####

Bay City Capital GF Xinde International Life Sciences USD Fund, L.P.

750 Battery Street, Suite 400
San Francisco, CA 94111
Attn: Dayton Misfeldt
Email: #####

Dashaco Limited

12-14 Finch Road
Douglas, Isle of Man, IM1 2PT
Attn: Stephen Schuster
Email: #####
Attn: Stephen Wilson
Email: #####

**LEASE
BETWEEN**

EMERY STATION JOINT VENTURE LLC

(Landlord)

and

GRITSTONE ONCOLOGY, INC.

(Tenant)

**EMERY STATION I
5858 Horton Street
Emeryville, California**

LEASE

**ARTICLE 1
BASIC LEASE PROVISIONS**

1.1 BASIC LEASE PROVISIONS

In the event of any conflict between these Basic Lease Provision, such other Lease provision shall control.

(1) BUILDING AND ADDRESS:

Emery Station I
5858 Horton Street
Emeryville, California 94608

(2) LANDLORD AND ADDRESS:

Emery Station Joint Venture, LLC
1120 Nye Street, Suite 400
San Rafael, California 94901

(3) TENANT AND CURRENT ADDRESS

(a) Name: Gritstone Oncology, Inc.

(b) State of incorporation: Delaware

Notices to Tenant shall be addressed:

Prior to occupancy:

Gritstone Oncology
3009 Webster Street
San Francisco, CA 94123

After occupancy: At the Premises

Attention: Sara Oakman

(4) DATE OF LEASE: as of November 11, 2015

(5) LEASE TERM: Approximately eighty-four (84) Months

(6) PROJECTED COMMENCEMENT DATE: November 11, 2015

(7) PROJECTED EXPIRATION DATE: The last day of the eighty-fourth (84th) calendar month following the Commencement Date.

- (8) MONTHLY BASE RENT: For the period running from the Commencement Date up to and including the last day of the twelfth full calendar month following the Commencement Date, Monthly Base Rent shall be \$44,648.80 per month. Monthly Base Rent will increase by three percent (3%) on the first day of the thirteenth (13th) full calendar month following the Commencement Date and annually thereafter throughout the remainder of the Lease Term. In addition to Monthly Base Rent, Tenant shall also pay Tenant's Share of Operating Expenses and Taxes in the form of Rent Deposits and Rent Deposit Adjustments, as hereafter defined.
- Notwithstanding the forgoing, the first three (3) full calendar months of the Lease Term shall be free of Monthly Base Rent. Tenant shall be obligated to pay its pro-rata share of Operating Expenses and Taxes for said months.
- (9) RENTABLE AREA OF THE PREMISES: 13,132 square feet
- (10) SUITE NUMBER: 210
- (11) SECURITY DEPOSIT: \$53,313.00
- (12) TENANT'S USE OF PREMISES (the "Use"): Laboratory research and development use, including associated office uses and uses ancillary thereto.
- (13) PARKING: Up to twenty (20) unreserved, non-premium parking spaces in the Terraces garage. Tenant shall pay Landlord's quoted rates therefore, which is \$100 to \$150 per space per month, depending on location, as of the Date of Lease. For the first three (3) full calendar months of the Lease term, Tenant shall be obligated to pay for at least ten (10) of said parking space and thereafter for the remainder of the Lease Term shall be obligated to pay for at least twenty (20) of said parking spaces, regardless of whether Tenant is utilizing the full amount of such paid-for spaces or not. Parking shall be personal to the Tenant and shall not be assigned or leased to any entity without Landlord's express written consent. Subject to availability, which shall be determined by Landlord in its reasonable discretion, Tenant may request to lease up to six (6) additional stalls on a month-to-month basis, such extra stalls recapturable by Landlord at any time after written notice to Tenant.
- (14) BROKERS:
- Landlord's Broker: Greg Walker / Jones Lang LaSalle
Tenant's Broker: Tim Mason / Kidder Matthew
- (15) TENANT IMPROVEMENTS: Tenant will accept the Premises in their as-is condition subject only to Landlord's agreement, at its sole cost and expense, to make the alterations thereto specifically outlined in Exhibit B hereof ("Landlord Work").

ENUMERATION OF EXHIBITS AND RIDER

The Exhibits and Rider set forth below and attached to this Lease are incorporated in this Lease by this reference:

EXHIBIT A	Plan of Premises.
EXHIBIT B	Workletter Agreement / Landlord Work
EXHIBIT C-1	Laboratory Rules and Regulations
EXHIBIT C-2	Rules and Regulations
EXHIBIT D	Space To Which Right Of First Offer Applies
RIDER 1	Commencement Date Agreement

1.2 DEFINITIONS

For purposes hereof, the following terms shall have the following meanings:

AFFILIATE: Any corporation or other business entity that is currently owned or controlled by, owns or controls, or is under common ownership or control with Tenant.

BUILDING: The building located at the address specified in Section 1.1. The Building may include office, lab, retail and other uses.

COMMENCEMENT DATE: The date specified in Section 1.1 as the Projected Commencement Date, unless changed by operation of Article Two.

COMMON AREAS: All areas of the Project made available by Landlord from time to time for the general common use or benefit of the tenants of the Building, and their employees and invitees, or the public, as such areas currently exist and as they may be changed from time to time.

DECORATION: Tenant Alterations which do not require a building permit and which do not involve any of the structural elements of the Building, or any of the Building's systems, including its electrical, mechanical, plumbing, security, heating, ventilating, air-conditioning, communication, and fire and life safety systems.

DEFAULT RATE: Two (2) percentage points above the rate then most recently announced by Bank of America N.T.& S.A. at its San Francisco main office as its base lending reference rate, from time to time announced, but in no event higher than the maximum rate permitted by Law.

EXPIRATION DATE: The date specified in Section 1.1, as determined under Article Two.

FORCE MAJEURE: Any accident, casualty, act of God, war or civil commotion, strike or labor troubles, or any cause whatsoever beyond the reasonable control of Landlord or Tenant, as applicable, including water shortages, energy shortages or governmental preemption in connection with an act of God, a national emergency, or by reason of Law, or by reason of the conditions of supply and demand which have been or are affected by act of God, war or other emergency.

INDEMNITEES: Collectively, Landlord, any Mortgagee or ground lessor of the Property, the property manager and the leasing manager for the Property and their respective partners, members, directors, officers, agents and employees.

LAND: The parcel(s) of real estate on which the Building and Project are located.

LANDLORD WORK: The construction or installation of improvements to the Premises, to be furnished by Landlord, as specifically described in the Workletter or exhibits attached hereto.

LAWS OR LAW: All laws, ordinances, rules, regulations, other requirements, orders, rulings or decisions adopted or made by any governmental body, agency, department or judicial authority having jurisdiction over the Property, the Premises or Tenant's activities at the Premises and any covenants, conditions or restrictions of record which affect the Property.

LEASE: This instrument and all exhibits and riders attached hereto, as may be amended from time to time.

LEASE YEAR: The twelve month period beginning on the Commencement Date and ending on the last day of each subsequent twelfth calendar month, or shorter (if applicable), period until the Expiration Date.

MONTHLY BASE RENT: The monthly rent specified in Section 1.1.

MORTGAGEE: Any holder of a mortgage, deed of trust or other security instrument encumbering the Property.

NATIONAL HOLIDAY'S: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day and other holidays recognized by the Landlord and the janitorial and other unions servicing the Building in accordance with their contracts.

OPERATING EXPENSES: All costs, expenses and disbursements of every kind and nature which Landlord shall pay or become obligated to pay in connection with the ownership, management, operation, maintenance, replacement and repair of the Building and the Property (including, without limitation, property management fees, costs and expenses, and the amortized portion of any capital expenditure or improvement, together with interest thereon, and the costs of changing utility service providers) including the cost of operating any shared campus amenities such as a campus health club/workout center, conference room(s) and the like for the benefit of the Project and its tenants. Operating Expenses shall not include, (i) costs of alterations of the premises of tenants of the Project, (ii) original construction costs or original capital expenditures for expansion of the Project, (iii) costs for employees not dedicated full time to the Project, unless such costs are reasonably pro-rated to reflect time spent on the Project, (iv) legal costs for disputes with tenants, (v) charitable contributions, (vi) costs associated with the sale or

refinancing of the Project, (vii) costs to purchase or rent fine art, (viii) any expense reimbursed by a third party, (ix) depreciation charges, (x) interest and principal payments on loans (except for loans for capital improvements which Landlord is allowed to include in Operating Expenses as provided above), (xi) ground rental payments, (xii) real estate brokerage and leasing commissions, (xiii) advertising and marketing expenses, (xiv) costs of Landlord reimbursed by insurance proceeds, (xv) expenses incurred in negotiating leases of tenants in the Project or enforcing lease obligations of tenants in the Project and (xvi) Landlord's general corporate overhead. If any Operating Expense, though paid in one year, relates to more than one calendar year, at the option of Landlord such expense may be proportionately allocated among such related calendar years; provided that only those periods falling within the Term of this Lease shall be allocated to Tenant. Operating Expenses for the Building that are not, in Landlord's reasonable discretion, allocable solely to either the lab, office, retail or other portions of the Building shall be equitably allocated by Landlord between such uses.

PREMISES: The space located in the Building at the Suite Number listed in Section 1.1 and depicted on Exhibit A attached hereto.

PROJECT or PROPERTY: The Project consists of the multi-use building located at the street address specified in Section 1.1 in Emeryville, California, associated surface and garage parking as designated by Landlord from time to time, landscaping and improvements, together with the Land, any associated interests in real property, and the personal property, fixtures, machinery, equipment, systems and apparatus located in or used in conjunction with any of the foregoing. The Project may also be referred to as the Property.

REAL PROPERTY: The Property excluding any personal property.

RENT: Collectively, Monthly Base Rent, Rent Adjustments and Rent Adjustment Deposits, and all other charges, payments, late fees or other amounts required to be paid by Tenant under this Lease.

RENT ADJUSTMENT: Any amounts owed by Tenant for payment of Operating Expenses or Taxes. The Rent Adjustments shall be determined and paid as provided in Article Four.

RENT ADJUSTMENT DEPOSIT: An amount equal to Landlord's estimate of the Rent Adjustment attributable to each month of the applicable Lease Year. On or before the beginning of each Lease Year or with Landlord's Statement (defined in Article Four), Landlord may estimate and notify Tenant in writing of its estimate of the amount of Tenant's Share of Operating Expenses and of Taxes for such Lease Year. The last estimate by Landlord shall remain in effect as the applicable Rent Adjustment Deposit unless and until Landlord notifies Tenant in writing of a change, which notice may be given by Landlord from time to time during a Lease Year.

RENTABLE AREA OF THE PREMISES: The amount of square footage set forth in Section 1.1.

SECURITY DEPOSIT: The funds specified in Section 1.1, if any, deposited by Tenant with Landlord as security for Tenant's performance of its obligations under this Lease.

STANDARD OPERATING HOURS: Monday through Friday from 8:00 A.M. to 6:00 P.M. and Saturdays from 9:00 A.M. to 1:00 P.M., excluding National Holidays.

SUBSTANTIALLY COMPLETE or SUBSTANTIAL COMPLETION: The completion of the Landlord Work, except for minor insubstantial details of construction, decoration or mechanical adjustments which remain to be done.

TAXES: All federal, state and local governmental taxes, assessments and charges of every kind or nature, whether general, special, ordinary or extraordinary, which Landlord shall pay or become obligated to pay because of or in connection with the ownership, leasing, management, control, sale, transfer or operation of the Property or any of its components (including any personal property used in connection therewith), which may also include any rental or similar taxes levied in lieu of or in addition to general real and/or personal property taxes. For purposes hereof, Taxes for any year shall be Taxes which are assessed for any period of such year, whether or not such Taxes are billed and payable in a subsequent calendar year. There shall be included in Taxes for any year the amount of all fees, costs and expenses (including reasonable attorneys' fees) paid by Landlord during such year in seeking or obtaining any refund or reduction of Taxes. Taxes for any year shall be reduced by the net amount of any tax refund received by Landlord attributable to such year. If a special assessment payable in installments is levied against any part of the Property, Taxes for any year shall include only the installment of such assessment and any interest payable or paid during such year. Taxes shall not include any federal or state inheritance, general income, gift or estate taxes, except that if a change occurs in the method of taxation resulting in whole or in part in the substitution of any such taxes, or any other assessment, for any Taxes as above defined, such substituted taxes or assessments shall be included in the Taxes.

TENANT ADDITIONS: Collectively, Landlord Work and Tenant Alterations.

TENANT ALTERATIONS: Any alterations, improvements, additions, installations or construction in or to the Premises or any Building systems serving the Premises (excluding Landlord Work); and any supplementary air-conditioning systems installed by Landlord or by Tenant at Landlord's request pursuant to Section 6.1(b).

TENANT DELAY: Any event or occurrence that delays the completion of the Landlord Work which is caused by or is described as follows:

(1) special work, changes, alterations or additions requested or made by Tenant in the design or finish in any part of the Premises after approval of the plans and specifications (as described in the Workletter);

(2) Tenant's delay in submitting plans, supplying information, approving plans, specifications or estimates, giving authorizations or otherwise;

(3) failure to approve and pay for such Tenant Work as Landlord undertakes to complete at Tenant's expense;

(4) the performance or completion by Tenant or any person engaged by Tenant of any work in or about the Premises; or

(5) failure to perform or comply with any obligation or condition binding upon Tenant pursuant to the Workletter, including the failure to approve and pay for such Landlord Work or other items if and to the extent the Workletter provides they are to be approved or paid by Tenant.

TENANT WORK: All work installed or furnished to the Premises by Tenant pursuant to the Workletter.

TENANT'S SHARE: The percentage that represents the ratio of the Rentable Area of the Premises to the Rentable Area of the Building, as determined by Landlord From time to time. Tenant acknowledges that the Rentable Area of the Building may change during the Term.

TERM: The term of this Lease commencing on the Commencement Date and expiring on the Expiration Date.

TERMINATION DATE: The Expiration Date or such earlier date as this Lease terminates or Tenant's right to possession of the Premises terminates.

WORKLETTER: The Agreement regarding the manner of completion of Landlord Work and Tenant Work set forth on Exhibit B attached hereto.

ARTICLE 2
PREMISES, TERM, FAILURE TO GIVE POSSESSION, AND PARKING

2.1 LEASE OF PREMISES

(a) Landlord hereby leases to Tenant and Tenant hereby leases from Landlord the Premises for the Term and upon the terms, covenants and conditions provided in this Lease. In the event Landlord delivers possession of the Premises to Tenant prior to the Commencement Date, Tenant shall be subject to all of the terms, covenants and conditions of this Lease (except with respect to the payment of Rent) as of the date of such possession.

(b) Tenant shall have the non-exclusive right to use of the shared amenities for the EmeryStation campus, as they may exist from time-to-time, such as the conference room and the employee exercise center, etc., in accordance with the standard Building policy regulating such usage.

2.2 TERM

(a) The Commencement Date shall be the date determined as follows:

(1) Subject to Tenant Delay, if the Landlord Work is Substantially Complete on or before the Projected Commencement Date, then on the date which is the earlier to occur of: (a) the Projected Commencement Date, or (b) the date Tenant first occupies all or part of the Premises for the conduct of business; or

(2) Subject to Tenant Delay, if the Landlord Work is not Substantially Complete by the Projected Commencement Date, then on the date on which the Landlord Work is Substantially Complete.

(b) Within thirty (30) days following the occurrence of the Commencement Date, Landlord and Tenant shall enter into an agreement (the form of which is attached hereto as Rider 1) confirming the Commencement Date and the Expiration Date. If Tenant fails to enter into such agreement, then the Commencement Date and the Expiration Date shall be the dates designated by Landlord in such agreement.

2.3 FAILURE TO GIVE POSSESSION

If Landlord shall be unable to give possession of the Promises on the Projected Commencement Date by reason of the following: (i) the Building has not been sufficiently completed to make the Premises ready for occupancy, (ii) the Landlord Work is not Substantially Complete and not as a result of any default by Landlord under this Lease, (iii) the holding over or retention of possession of any tenant, tenants or occupants, or (iv) for any other reason outside the reasonable control of Landlord, then Landlord shall not be subject to any liability for the failure to give possession on said date. Under such circumstances the rent reserved and covenanted to be paid herein shall not commence until the Premises are made available to Tenant by Landlord, and no such failure to give possession on the Projected Commencement Date shall affect the validity of this Lease or the obligations of the Tenant hereunder. The Lease shall be amended so that the Term shall be extended by the period of time possession is delayed. The Premises shall be deemed to be ready for Tenant's occupancy in the event Landlord's Work is Substantially Complete, or if the delay in the availability of the Premises for occupancy shall be due to any Tenant Delay and/or default on the part of Tenant. In the event of any dispute as to whether the Landlord Work is Substantially Complete, the decision, of Landlord's architect shall be final and binding on the parties. Notwithstanding anything contained to the contrary in this Lease, if Landlord has not delivered the Premises on or before the date that is ninety (90) days after the Projected Commencement Date, Tenant may terminate this Lease and Landlord shall return to Tenant all sums delivered to Landlord by Tenant in connection with this Lease and this Lease shall be of no further force and effect. Such termination by Tenant shall require formal written notice to Landlord ("Tenant's Intention to Terminate Notice") no later than five (5) days following the ninetieth (90th) day following the Projected Commencement Date that Tenant intends to terminate the Lease unless the Premises is not Substantially Complete and possession thereof delivered to Tenant with ten (10) days following Tenant's Intention to Terminate Notice). In the event the Premises is indeed Substantially Completed and possession thereof delivered to Tenant within said ten (10) day period, then Tenant's termination of the Lease shall be null and void and the Lease shall continue to be in full force and effect.

2.4 CONDITION OF PREMISES

Tenant shall notify Landlord in writing within thirty (30) days after the Commencement Date of any defects in the Premises claimed by Tenant or in the materials or workmanship furnished by Landlord in completing the Landlord Work and any defects in the Building systems. Except for defects stated in such notice, Tenant shall be conclusively deemed to have accepted the Premises "AS IS" in the condition existing on the date Tenant first takes possession, and to

have waived all claims relating to the condition of the Premises. Landlord shall proceed diligently to correct the defects stated in such notice unless Landlord disputes the existence of any such defects. In the event of any dispute as to the existence of any such defects, the decision of Landlord's architect shall be final and binding on the parties. No agreement of Landlord to alter, remodel, decorate, clean or improve the Premises or the Real Property and no representation regarding the condition of the Premises or the Real Property has been made by or on behalf of Landlord to Tenant, except as may be specifically stated in this Lease or in the Workletter.

2.5 PARKING

During the Term, Tenant may use the number of spaces specified in Section 1.1 for parking at the standard prevailing monthly rates being charged from time to time by Landlord or its parking operator without regard to discounts provided to any other occupants of the Building or other buildings in the campus. In the event Tenant fails at any time to pay the full amount of such parking charges, Tenant's parking rights shall be reduced to the extent of Tenant's failure to pay for any such parking. The locations and type of parking shall be designated by Landlord or Landlord's parking operator from time to time. Tenant acknowledges and agrees that the parking spaces serving the Project may include valet parking, tandem parking and a mixture of spaces for compact vehicles as well as full-size passenger automobiles, and that Tenant shall not use parking spaces for vehicles larger than the striped size of the parking spaces. All vehicles utilizing Tenant's parking privileges shall prominently display identification stickers or other markers, and/or have passes or keycards for ingress and egress, as may be required and provided by Landlord or its parking operator from time to time. Tenant shall comply with any and all parking rules and regulations from time to time established by Landlord or Landlord's parking operator, including a requirement that Tenant pay to Landlord or Landlord's parking operator a charge for loss and replacement of passes, keycards, identification stickers or markers, and for any and all loss or other damage caused by persons or vehicles related to use of Tenant's parking privileges. Tenant shall not allow any vehicles using Tenant's parking privileges to be parked, loaded or unloaded except in accordance with this Section, including in the areas and in the manner designated by Landlord or its parking operator for such activities. If any vehicle is using the parking or loading areas contrary to any provision of this Section, Landlord or its parking operator shall have the right, in addition to all other rights and remedies of Landlord under this Lease, to remove or tow away the vehicle without prior notice to Tenant, and the cost thereof shall be paid to Landlord within ten (10) days after notice from Landlord to Tenant.

2.6 RIGHT OF FIRST OFFER

(a) Subject to the rights of any existing tenants pursuant to written leases, during the Initial Term (but not during any extension thereof) Landlord shall provide Tenant with a notice in the event that at any time after the Effective Date hereof, Available Premises (as hereinafter defined) becomes available (the "Right of First Offer"). Landlord's notice shall identify the space and specify the basic terms and conditions on which Landlord proposes to lease the Available Space (the "ROFO Notice").

(b) As used in this Section 2.6, the term "Available Premises" shall mean any suite(s) located on that portion of the Building's second floor specifically delineated in Exhibit D which become available for leasing to third parties. Space shall not be deemed to be Available Premises if an existing tenant renews or extends its term pursuant to the terms of a written lease.

(c) Tenant shall have ten (10) business days after the receipt of the ROFO Notice (the "ROFO Deadline") to either accept or reject the Available Premises on the terms and conditions set forth in the ROFO Notice by providing written notice thereof to Landlord. If Tenant accepts the ROFO Notice, Landlord and Tenant shall enter into an amendment to this Lease adding the Available Premises on the terms and condition set forth in the ROFO Notice accepted by Tenant. If Tenant does not accept the ROFO Notice, Landlord shall have the right to lease the Available Premises or any part thereof to any third party on terms in which the net effective rent over the lease term are not less than ninety-three percent (93%) of the net effective rent proposed in Landlord's ROFO Notice. If Landlord does not so lease the Available Premises or any part thereof to such a third party (or parties) within one hundred-eighty (180) days following the ROFO Deadline, Landlord shall not be able to lease the Available Space to any third party without first offering it to Tenant pursuant to the process outlined herein.

(d) Notwithstanding anything to the contrary contained in this Section, all rights of Tenant pursuant to this Section shall automatically terminate without notice and shall be of no further force and effect with respect to the then Available Premises, whether or not Tenant has timely exercised the option granted herein, if on the date Tenant exercises the Right of First Offer or on the date immediately preceding the commencement date of the term for such space (i) a Default has occurred and is continuing or a condition, event or act has occurred which with the passage of time or the giving of notice, or both, would constitute a Default under the Lease, or (ii) the named Tenant hereunder or pursuant to a Permitted Transfer, a Tenant Affiliate, does not occupy at least fifty percent (50%) of the Premises.

2.7 TENANT EXPANSION

Tenant has indicated to Landlord that it expects to have material additional space needs during the Initial Term of the Lease, and agrees to provide Landlord a preferential good faith opportunity to meet such increased space needs. As consideration therefore, in the event that, during the Initial Term of the Lease, Tenant and Landlord or one of Landlord's Affiliates, in their respective sole and absolute discretions, elect to enter into a lease for space in the Building or for space in another building in Emeryville owned by Landlord or one of Landlord's Affiliates where that lease covers space that is at least fifty percent (50%) larger in terms of rentable square feet than Tenant's Premises in the Building at the time (a "New Lease"), Landlord agrees, if Tenant so requests, to terminate this Lease at no cost to Tenant upon the commencement of the term of the New Lease.

2.8 RENEWAL OPTION

(a) Tenant shall have the option to renew this Lease ("Renewal Option") with respect to the entirety of the Premises for one (1) additional term of three (3) years ("Renewal Term"), commencing upon expiration of the initial Term. The Renewal Option must be exercised, if at all, by written notice given by Tenant to Landlord not earlier than twelve (12) months nor later than nine (9) months prior to expiration of the initial Term. If Tenant properly exercises the Renewal Option, references in the Lease to the Term shall be deemed to include the Renewal

Term. The Renewal Option shall be null and void and Tenant shall have no right to renew this Lease if on the date Tenant exercises the Renewal Option or on the date immediately preceding the commencement date of the Renewal Term a Default beyond the applicable cure period shall have occurred and be continuing hereunder.

(b) If Tenant properly exercises the Renewal Option, then during the Renewal Term all of the terms and conditions set forth in this Lease as applicable to the Premises during the initial Term shall apply during the Renewal Term, including without limitation the obligation to pay Rent Adjustments, except that (i) Tenant shall accept the Premises in their then "as-is" state and condition and Landlord shall have no obligation to repaint, remodel, repair or make or pay for any improvements to the Premises, (ii) during the Renewal Term the Monthly Base Rent payable by Tenant shall be Fair Market Rent during the Renewal Term, determined as hereinafter set forth, but in no event shall the Monthly Base Rent during the Renewal Term be less than that paid by Tenant during the final twelve (12) months of the Initial Term, and (iii) there shall be no further option to renew or extend the Term of this Lease.

(c) For purposes of this Section, the term "Fair Market Rent" shall mean the base rental rate, on a "triple-net" basis, periodic rental rate adjustment and other charges and increases, if any, for lab space comparable in size, location and quality of the Premises under primary lease (and not sublease) to new or renewing tenants, for a comparable term and taking into consideration such amenities as existing improvements, view, floor on which the Premises are situated and the like, situated in comparable buildings in Emeryville, and Berkeley, California.

(d) If Tenant properly exercises the Renewal Option, Landlord, by notice to Tenant not more than one-hundred-eighty (180) days after Tenant's exercise of the Renewal Option, shall indicate Landlord's determination of the Fair Market Rent. Tenant, within fifteen (15) days after the date on which Landlord provides such notice of the Fair Market Rent shall either (i) give Landlord final binding written notice ("Binding Notice") of Tenant's acceptance of Landlord's determination of the Fair Market Rent, or (ii) if Tenant disagrees with Landlord's determination, provide Landlord with written notice of Tenant's election to submit the Fair Market Rent to binding arbitration (the "Arbitration Notice"). If Tenant fails to provide Landlord with either a Binding Notice or Arbitration Notice within such fifteen (15) day period, Landlord shall send Tenant a second written notice specifying the Fair Market Rent ("Second FMV Notice") and such Second FMV Notice shall include the following: "FAILURE TO ACCEPT SAID FAIR MARKET RENT AMOUNT IN WRITING OR DISPUTE SUCH AMOUNT BY SUBMITTING TO ARBITRATION IN ACCORDANCE WITH SECTION 2.8(d) OF THE LEASE WITHIN TEN (10) DAYS SHALL BE DEEMED TENANTS AGREEMENT TO PAY SUCH AMOUNT DURING THE RENEWAL TERM." If Tenant fails to provide Landlord with either a Binding Notice or Arbitration Notice within ten (10) days after receiving the Second FMV Notice, Tenant shall have been deemed to have given the Binding Notice and the proposed Fair Market Rent shall be binding on Tenant during the Renewal Term. If Tenant provides or is deemed to have provided Landlord with a Binding Notice, Landlord and Tenant shall enter into the Renewal Amendment (as defined below) upon the terms and conditions set forth herein.

(e) If the parties are unable to agree upon the Fair Market Rent for the Premises within ten (10) days after Landlord's receipt of the Arbitration Notice, Fair Market Rent as of commencement of the Renewal Term shall be determined as follows:

(1) Within twenty (20) days after the date Tenant delivers the Arbitration Notice, Tenant, at its sole expense, shall obtain and deliver in writing to Landlord a determination of the Fair Market Rent for the Premises for a term equal to the Renewal Term from a broker or appraiser ("Tenant's broker") licensed in the State of California and engaged in the office markets in Emeryville, California, for at least the immediately preceding five (5) years. If Landlord accepts such determination, Landlord shall provide written notice thereof within ten (10) days after Landlord's receipt of such determination and the Monthly Base Rent for the Renewal Term shall be adjusted to an amount equal to the Fair Market Rent determined by Tenant's broker. Landlord shall be deemed to have rejected Tenant's determination if Landlord fails to respond within the ten (10) day period.

(2) If Landlord provides notice that it rejects, or is deemed to have rejected, such determination, within twenty (20) days after receipt of the determination of Tenant's broker, Landlord shall designate a broker or appraiser ("Landlord's broker") licensed in the State of California and possessing the qualifications set forth in (1) above. Landlord's broker and Tenant's broker shall name a third broker, similarly qualified and who is not then or has not previously acted for either party, within five (5) days after the appointment of Landlord's broker ("Neutral Broker").

(3) The Neutral Broker shall determine the Fair Market Rent for the Premises as of the commencement of the Renewal Term within fifteen (15) days after the appointment of such Neutral Broker by choosing the determination of the Landlord's broker or the Tenant's broker which is closest to its own determination of Fair Market Rent. The decision of the Neutral Broker shall be binding on Landlord and Tenant.

(f) Landlord shall pay the costs and fees of Landlord's broker in connection with any determination hereunder, and Tenant shall pay the costs and fees of Tenant's broker in connection with such determination. The costs and fees of the Neutral Broker shall be paid one-half by Landlord and one-half by Tenant.

(g) If the amount of the Fair Market Rent has not been determined pursuant to this Section 2.6 as of the commencement of the Renewal Term, then Tenant shall continue to pay the Monthly Base Rent in effect during the last month of the initial Term until the amount of the Fair Market Rent is determined. When such determination is made, Tenant shall pay any deficiency to Landlord upon demand.

(h) If Tenant is entitled to and properly exercises its Renewal Option, upon determination of Fair Market Rent pursuant to this Section 2.6, Landlord shall prepare an amendment (the "Renewal Amendment") to reflect changes in the Base Rent, Term, Expiration Date and other appropriate terms. The Renewal Amendment shall be sent to Tenant within a reasonable time after determination of Fair Market Rent and, provided the same is accurate, Tenant shall execute and return the Renewal Amendment to Landlord within ten (10) days after Tenant's receipt of same, but an otherwise valid exercise of the Renewal Option shall be fully effective whether or not the Renewal Amendment is executed.

**ARTICLE 3
RENT**

Tenant agrees to pay to Landlord at the first office specified in Section 1.1, or to such other persons, or at such other places designated by Landlord, without any prior demand therefor in immediately available funds and without any deduction or offset whatsoever, Rent, including Monthly Base Rent and Rent Adjustments in accordance with Article Four, during the Term. Monthly Base Rent shall be paid monthly in advance on the first day of each month of the Term, except that the first installment of Monthly Base Rent shall be paid by Tenant to Landlord concurrently with execution of this Lease. Monthly Base Rent shall be prorated for partial months within the Term. Unpaid Rent shall bear interest at the Default Rate from the date due until paid. Tenant's covenant to pay Rent shall be independent of every other covenant in this Lease.

**ARTICLE 4
RENT ADJUSTMENTS AND PAYMENTS**

4.1 RENT ADJUSTMENTS

Commencing upon the Commencement Date and throughout the Lease Term, Tenant shall pay to Landlord Rent Adjustments as follows:

(1) The Rent Adjustment Deposit representing Tenant's Share of Operating Expenses for the applicable Lease Year, monthly during the Term with the payment of Monthly Base Rent; and

(2) The Rent Adjustment Deposit representing Tenant's Share of Taxes for the applicable Lease Year, monthly during the Term with the payment of Monthly Base Rent; and

(3) Any Rent Adjustments due in excess of the Rent Adjustment Deposits in accordance with Section 4.2. Rent Adjustments due from Tenant to Landlord for any Lease Year shall be Tenant's Share of Operating Expenses for such year and Tenant's Share of Taxes for such year.

4.2 STATEMENT OF LANDLORD

As soon as feasible after the expiration of each calendar year, Landlord will furnish Tenant a statement ("Landlord's Statement") showing the following:

(1) Operating Expenses and Taxes for the calendar year;

(2) The amount of Rent Adjustments due Landlord for the last calendar year, less credit for Rent Adjustment Deposits paid, if any; and

(3) Any change in the Rent Adjustment Deposit due monthly in the current calendar year, including the amount or revised amount due for months preceding any such change pursuant to Landlord's Statement.

Tenant shall pay to Landlord within ten (10) days after receipt of such statement any amounts for Rent Adjustments then due in accordance with Landlord's Statement. Any amounts due from Landlord to Tenant pursuant to this Section shall be credited to the Rent Adjustment Deposit next coming due, or refunded to Tenant if the Term has already expired provided Tenant is not in default hereunder. No interest or penalties shall accrue on any amounts that Landlord is obligated to credit or refund to Tenant by reason of this Section 4.2. Landlord's failure to deliver Landlord's Statement or to compute the amount of the Rent Adjustments shall not constitute a waiver by Landlord of its right to deliver such items nor constitute a waiver or release of Tenant's obligations to pay such amounts. The Rent Adjustment Deposit shall be against Rent Adjustments due for the applicable Lease Year. During the last complete Lease Year or during any partial Lease Year in which the Lease terminates, Landlord may include in the Rent Adjustment Deposit its estimate of Rent Adjustments which may not be finally determined until after the termination of this Lease. Tenant's obligation to pay Rent Adjustments survives the expiration or termination of the Lease. Notwithstanding the foregoing, in no event shall the sum of Monthly Base Rent and the Rent Adjustments be less than the Monthly Base Rent payable.

4.3 BOOKS AND RECORDS

Landlord shall maintain books and records showing Operating Expenses and Taxes in accordance with sound accounting and management practices, consistently applied. The Tenant or its representative (which representative shall be a certified public accountant licensed to do business in the state in which the Property is located and whose primary business is certified public accounting and who shall not be paid on a contingency basis) shall have the right, for a period of sixty (60) days following the date upon which Landlord's Statement is delivered to Tenant, to examine the Landlord's books and records with respect to the items in the foregoing statement of Operating Expenses and Taxes during normal business hours, upon written notice, delivered at least three (3) business days in advance. If Tenant does not object in writing to Landlord's Statement within ninety (90) days of Tenant's receipt thereof, specifying the nature of the item in dispute and the reasons therefor, then Landlord's Statement shall be considered final and accepted by Tenant. If Tenant does dispute any Landlord's Statement, Tenant shall deliver a copy of any such audit to Landlord at the time of notification of the dispute. If Tenant does not provide such notice of dispute and a copy of such audit to Landlord within such ninety day (90) day period, it shall be deemed to have waived such right to dispute Landlord's Statement. Any amount due to the Landlord as shown on Landlord's Statement, whether or not disputed by Tenant as provided herein shall be paid by Tenant when due as provided above, without prejudice to any such written exception. In no event shall Tenant be permitted to examine Landlord's records or to dispute any statement of Expenses unless Tenant has paid and continues to pay all Rent when due. Upon resolution of any dispute with respect to Operating Expenses and Taxes, Tenant shall either pay Landlord any shortfall or Landlord shall credit Tenant with respect to any overages paid by Tenant. The records obtained by Tenant shall be treated as confidential and neither Tenant nor any of its representatives or agents shall disclose or discuss the information set forth in the audit to or with any other person or entity ("Confidentiality Requirement"). Tenant shall indemnify and hold Landlord harmless for any losses or damages arising out of the breach of the Confidentiality Requirement. In no event shall Tenant be permitted to examine Landlord's records or to dispute any statement of Expenses unless Tenant has paid and continues to pay all Rent when due.

4.4 TENANT OR LEASE SPECIFIC TAXES

In addition to Monthly Base Rent, Rent Adjustments, Rent Adjustment Deposits and other charges to be paid by Tenant, Tenant shall pay to Landlord, upon demand, any and all taxes payable by Landlord (other than federal or state inheritance, general income, gift or estate taxes) whether or not now customary or within the contemplation of the parties hereto: (a) upon, allocable to, or measured by the Rent payable hereunder, including any gross receipts tax or excise tax levied by any governmental or taxing body with respect to the receipt of such rent; or (b) upon or with respect to the possession, leasing, operation, management, maintenance, alteration, repair, use or occupancy by Tenant of the Premises or any portion thereof; or (c) upon the measured value of Tenant's personal property located in the Premises or in any storeroom or any other place in the Premises or the Property, or the areas used in connection with the operation of the Property, it being the intention of Landlord and Tenant that, to the extent possible, such personal property taxes shall be billed to and paid directly by Tenant; (d) resulting from Landlord Work, Tenant Work or Tenant Alterations to the Premises, whether title thereto is in Landlord or Tenant; or (e) upon this transaction; provided that Tenant shall not have any obligation to pay such taxes to the extent such taxes are already included in the calculation of Operating Expenses for the Project, Taxes paid by Tenant pursuant to this Section 4.5 shall not be included in any computation of Taxes payable pursuant to Sections 4.1 and 4.2.

ARTICLE 5 SECURITY DEPOSIT

Tenant concurrently with the execution of this Lease shall pay to Landlord in immediately available funds the Security Deposit. The Security Deposit may be applied by Landlord to cure, in whole or part, any default of Tenant under this Lease, and upon notice by Landlord of such application, Tenant shall replenish the Security Deposit in full by paying to Landlord within ten (10) days of demand the amount so applied. Landlord's application of the Security Deposit shall not constitute a waiver of Tenant's default to the extent that the Security Deposit does not fully compensate Landlord for all losses, damages, costs and expenses incurred by Landlord in connection with such default and shall not prejudice any other rights or remedies available to Landlord under this Lease or by Law. Landlord shall not pay any interest on the Security Deposit. Landlord shall not be required to keep the Security Deposit separate from its general accounts. The Security Deposit shall not be deemed an advance payment of Rent or a measure of damages for any default by Tenant under this Lease, nor shall it be a bar or defense of any action that Landlord may at any time commence against Tenant. In the absence of evidence satisfactory to Landlord of an assignment of the right to receive the Security Deposit or the remaining balance thereof at the expiration or earlier termination of this Lease, Landlord may return the Security Deposit to the original Tenant, regardless of one or more assignments of this Lease. Upon the transfer of Landlord's interest under this Lease, Landlord's obligation to Tenant with respect to the Security Deposit shall terminate upon the date that Landlord transfers to the successor

Landlord under this Lease the Security Deposit, or any balance thereof and provides Tenant with evidence reasonably satisfactory to Tenant that such transfer occurred. If Tenant shall fully and faithfully comply with all the terms, provisions, covenants, and conditions of this Lease, the Security Deposit, or any balance thereof, shall be returned to Tenant within thirty (30) days after Landlord recovers possession of the Premises or such longer time as may be permissible under Law. Tenant hereby waives any and all rights of Tenant under the provisions of Section 1950.7 of the California Civil Code or other Law regarding security deposits.

Tenant shall have the right to submit either cash or a Letter of Credit, as such term is hereafter defined, for the Security Deposit. In the event Tenant notifies Landlord of Tenant's intent to so utilize a Letter of Credit, Landlord will reasonably cooperate with Tenant to do so. For purposes of this section, "Letter of Credit" shall mean an unconditional, irrevocable sight draft letter of credit, draw-able in the San Francisco Bay Area, issued by a national bank reasonably satisfactory to Landlord, naming Landlord as the beneficiary and otherwise in form and substance reasonably satisfactory to Landlord. The Letter of Credit shall be for at least a one (1) year term and shall provide: (i) that Landlord may make partial and multiple draws thereunder; (ii) that if Tenant fails to pay any Rent due under the Lease after applicable notice and cure periods, if any, with respect to any provision of the Lease, Landlord may at its sole option draw upon the Letter of Credit in an amount sufficient to cure such failure by Tenant, and the bank will honor a sight draft of Landlord accompanied by only a statement of Landlord that it has the right to draw upon the Letter of Credit pursuant to the terms of the Lease or that Tenant has filed a petition of bankruptcy, (iii) that notwithstanding such statement, the bank shall honor such draw without inquiry and the bank shall not have the authority, ability, right or discretion to inquire as to the basis for such statement, (iv) that in the event of Landlord's assignment or other transfer of its interest in the Lease, the Letter of Credit shall be freely transferable by Landlord, one or more times, without charge and without recourse to the Landlord or the assignee or transferee of such interest; (v) that the Letter of Credit is governed by the Uniform Customs and Practice for Documentary Credits (2007 revisions), International Chamber of Commerce Publication No. 600; (vi) that the Letter of Credit will be automatically renewed upon the expiration of its initial term for additional one (1) year periods, not to extend beyond sixty (60) days after the Expiration Date of the Lease; and (vii) if the bank does not confirm the extension of the Letter of Credit at least thirty (30) days prior to the relevant expiration date or if the Tenant does not substitute a replacement Letter of Credit by such date, or if a monetary Default occurs under the Lease, Landlord shall be entitled to draw on the Letter of Credit and to hold and apply such funds as an additional Security Deposit in accordance with the terms of this Lease.

ARTICLE 6 SERVICES

(a) So long as the Lease is in full force and effect, Landlord shall furnish the following services the cost of which services shall be included in Operating Expenses or paid directly by Tenant to Landlord or, if so designated by Landlord, directly to the utility or service provider:

(1) heat, ventilation and air-conditioning ("HVAC") in the Premises as necessary in Landlord's reasonable judgment for the comfortable occupancy of the Premises under normal business office and lab operations, subject to compliance with all applicable voluntary and mandatory regulations and Laws;

(2) tempered and cold water for use in the labs and in lavatories in common with other tenants from the regular supply of the Building;

(3) customary cleaning and janitorial services in the Premises five (5) days per week, excluding National Holidays;

(4) washing of the outside windows in the Premises weather permitting at intervals determined by Landlord; and

(5) automatic passenger and swing/freight elevator service in common with other tenants of the Building. Freight elevator service will be subject to reasonable scheduling by Landlord and payment of Landlord's standard charges.

(b) If Tenant uses heat generating machines or equipment in the Premises to an extent which adversely affects the temperature otherwise maintained by the air-cooling system or whenever the occupancy or electrical load adversely affects the temperature otherwise maintained by the air-cooling system, Landlord reserves the right to install or to require Tenant to install supplementary air-conditioning units in the Premises. Tenant shall bear all costs and expenses related to the installation, maintenance and operation of such units.

6.2 ELECTRICAL SERVICES

(a) So long as the Lease is in full force and effect, Landlord shall furnish to the Premises as an Operating Expense or a service which is paid directly by Tenant to the utility provider, electric current for general office use, including normal lighting, normal business office machines and customary janitorial service. Notwithstanding any provision of the Lease to the contrary, without, in each instance, the prior written approval of Landlord, in Landlord's prudent business judgment, Tenant shall not; (i) make any alterations or additions to the electric equipment or systems; or (ii) install or use or permit the installation or use of any computer or electronic data processing equipment in the Premises other than personal computers, laptop computers and ancillary equipment. Tenant's use of electric current shall at no time exceed the capacity of the wiring, feeders and risers providing electric current to the Premises or the Building. The consent of Landlord to the installation of electric equipment shall not relieve Tenant from the obligation to limit usage of electricity to no more than such capacity.

(b) So long as the Lease is in full force and effect, Landlord shall furnish to the Premises replacement lamps, bulbs, ballasts and starters used in any normal Building lighting installed in the Premises, except that if the replacement or repair of such items is a result of negligence of Tenant, its employees, agents, servants, licensees, subtenants, contractors or invitees, such cost shall be paid by Tenant within ten (10) days after notice from Landlord and shall not be included as part of Operating Expenses.

6.3 ADDITIONAL AND AFTER HOUR SERVICES

(a) At Tenant's written request, Landlord shall furnish additional quantities of any of the services or utilities specified in Section 6.1, if Landlord can reasonably do so, on the terms set forth herein. For services or utilities requested by Tenant and furnished by Landlord, Tenant shall pay to Landlord as a charge therefor Landlord's prevailing rates charged from time to time for such services and utilities.

6.4 TELEPHONE SERVICES

All telephone, and communication connections which Tenant may desire shall be subject to Landlord's prior written approval, in Landlord's reasonable discretion, and the location of all wires and the work in connection therewith shall be performed by contractors approved by Landlord and shall be subject to the direction of Landlord, except that such approval is not required as to Tenant's telephone equipment (including cabling) within the Premises and from the Premises in a route designated by Landlord to any telephone cabinet or panel provided (as existing or as installed as part of Landlord's Work, if any) on Tenant's floor for Tenant's connection to the telephone cable serving the Building so long as Tenant's equipment does not require connections different than or additional to those to the telephone cabinet or panel provided. Except to the extent of such cabling within the Premises or from the Premises to such telephone cabinet or panel, Landlord reserves the right to designate and reasonably control the entity or entities providing telephone or other communication cable installation, removal, repair and maintenance in the Building and to restrict and control access to telephone cabinets or panels, so long as such entity is competitively priced with other similar vendors. In the event Landlord designates a particular vendor or vendors to provide such cable installation, removal, repair and maintenance for the Building, Tenant agrees to abide by and participate in such program. Tenant shall be responsible for and shall pay all costs incurred in connection with the installation of telephone cables and communication wiring in the Premises, including any hook-up, access and maintenance fees related to the installation of such wires and cables in the Premises and the commencement of service therein, and the maintenance thereafter of such wire and cables; and there shall be included in Operating Expenses for the Building all installation, removal, hook-up or maintenance costs incurred by Landlord in connection with telephone cables and communication wiring serving the Building which are not allocable to any individual users of such service but are allocable to the Building generally. If Tenant fails to maintain all telephone cables and communication wiring in the Premises and such failure affects or interferes with the operation or maintenance of any other telephone cables or communication wiring serving the Building, Landlord or any vendor hired by Landlord may enter into and upon the Premises forthwith and perform such repairs, restorations or alterations as Landlord deems necessary in order to eliminate any such interference (and Landlord may recover from Tenant all of Landlord's costs in connection therewith). If required by Landlord, no later than the Termination Date Tenant shall remove all telephone cables and communication wiring installed by Tenant for and during Tenant's occupancy. Tenant agrees that neither Landlord nor any of its agents or employees shall be liable to Tenant, or any of Tenant's employees, agents, customers or invitees or anyone claiming through, by or under Tenant, for any damages, injuries, losses, expenses, claims or causes of action because of any interruption, diminution, delay or discontinuance at any time for any reason in the furnishing of any telephone or other communication service to the Premises and the Building.

6.5 DELAYS IN FURNISHING SERVICES

Tenant agrees that Landlord shall not be in breach of this Lease nor be liable to Tenant for damages or otherwise, for any failure to furnish, or a delay in furnishing, or a change in the quantity or character of any service when such failure, delay or change is occasioned, in whole or in part, by repairs, improvements or mechanical breakdowns by the act or default of Tenant or other parties or by an event of Force Majeure. No such failure, delay or change shall be deemed to be an eviction or disturbance of Tenant's use and possession of the Premises, or relieve Tenant from paying Rent or from performing any other obligations of Tenant under this Lease, without any deduction or offset. Failure to any extent to make available, or any slowdown, stoppage, or interruption of, the specified utility services resulting from any cause, including changes in service provider or Landlord's compliance with any voluntary or similar governmental or business guidelines now or hereafter published or any requirements now or hereafter established by any governmental agency, board, or bureau having jurisdiction over the operation of the Property shall not render Landlord liable in any respect for damages to either persons, property, or business, nor be construed as an eviction of Tenant or work an abatement of Rent, nor relieve Tenant of Tenant's obligations for fulfillment of any covenant or agreement hereof. Should any equipment or machinery furnished by Landlord break down or for any cause cease to function properly, Landlord shall use reasonable diligence to repair same promptly, but Tenant shall have no claim for abatement of Rent or damages on account of any interruption of service occasioned thereby or resulting therefrom.

6.6 CHOICE OF SERVICE PROVIDER

Tenant acknowledges that Landlord may, at Landlord's sole option, to the extent permitted by applicable law, elect to change, from time to time, the company or companies which provide services (including electrical service, gas service, water, telephone and technical services) to the Building, the Premises and/or its occupants. Notwithstanding anything to the contrary set forth in this Lease, Tenant acknowledges that Landlord has not and does not make any representations or warranties concerning the identity or identities of the company or companies which provide services to the Building and the Premises or its occupants and Tenant acknowledges that the choice of service providers and matters concerning the engagement and termination thereof shall be solely that of Landlord. The foregoing provision is not intended to modify, amend, change or otherwise derogate any provision of this Lease concerning the nature or type of service to be provided or any specific information concerning the amount thereof to be provided. Tenant agrees to cooperate with Landlord and each of its service providers in connection with any change in service or provider.

6.7 SIGNAGE

Initial Building standard signage will be installed by Landlord in the directory in the main lobby of the Building, in the listing of tenants in the elevator lobby for the floor on which the Premises is located and at Tenant's main entry door to the Premises at Landlord's expense. Any change in such initial signage shall be only with Landlord's prior written consent, shall conform to Building standard signage and shall be at Tenant's sole cost and expense.

ARTICLE 7
POSSESSION, USE AND CONDITION OF PREMISES

7.1 POSSESSION AND USE OF PREMISES

(a) Tenant shall occupy and use the Premises only for the uses specified in Section 1.1 to conduct Tenant's business. Tenant shall not occupy or use the Premises (or permit the use or occupancy of the Premises) for any purpose or in any manner which: (1) is unlawful or in violation of any Law or Environmental Law; (2) may be dangerous to persons or property or which may increase the cost of, or invalidate, any policy of insurance carried on the Building or covering its operations; (3) is contrary to or prohibited by the terms and conditions of this Lease or the rules of the Building set forth in Article Eighteen; or (4) would create or continue a nuisance.

(b) Landlord shall provide Tenant with Access Card Keys and Tenant shall place a deposit ("Access Card Deposit") for such cards with Landlord to cover lost cards or cards which are not returned to Landlord at the end of the Term. Within thirty (30) days after the expiration or earlier termination of this Lease, Tenant shall return all access cards to Landlord and Landlord shall return the Access Card Deposit to Tenant less any amounts due for unreturned access cards.

(c) Landlord and Tenant acknowledge that the Americans With Disabilities Act of 1990 (42 U.S.C. § 12101 et seq.) and regulations and guidelines promulgated thereunder, as all of the same may be amended and supplemented from time to time (collectively referred to herein as the "ADA") establish requirements for business operations, accessibility and barrier removal, and that such requirements may or may not apply to the Premises, the Building and the Project depending on, among other things: (1) whether Tenant's business is deemed a "public accommodation" or "commercial facility", (2) whether such requirements are "readily achievable", and (3) whether a given alteration affects a "primary function area" or triggers "path of travel" requirements. The parties hereby agree that: (a) Landlord shall be responsible for ADA Title III compliance in the Common Areas, except as provided below, (b) Landlord shall be responsible for ADA Title III compliance in the Premises with respect to the Landlord Work and Tenant shall be responsible for ADA Title III Compliance in the Premises except for the Landlord Work; provided that Landlord represents and warrants that as of the Commencement Date, the Premises are ADA compliant such that, if they are not ADA complaint upon commencement of the Lease, Landlord shall make them compliant at Landlord's sole cost and expense, (c) Landlord may perform, or require that Tenant perform, and Tenant shall be responsible for the cost of, ADA Title III "path of travel" requirements triggered by Tenant Additions in the Premises, and (d) Landlord may perform, or require Tenant to perform, and Tenant shall be responsible for the cost of, ADA Title III compliance in the Common Areas necessitated by the Building being deemed to be a "public accommodation" instead of a "commercial facility" as a result of Tenant's use of the Premises. Tenant shall be solely responsible for requirements under Title I of the ADA relating to Tenant's employees.

(d) Hazardous Materials.

(1) Definitions. The following terms shall have the following meanings for purposes of this Lease:

(1) "Biohazardous Materials" means any and all substances and materials defined or referred to as a "medical waste," "biological waste," "biohazardous waste," "biohazardous material" or any other term of similar import under any Hazardous Materials Laws, including (but not limited to) California Health & Safety Code Sections 25105 et seq., and any regulations promulgated thereunder, as amended from time to time.

(2) "Environmental Condition" means the Release of any Hazardous Materials in, over, on, under, through, from or about the Project (including, but not limited to, the Premises).

(3) "Environmental Damages" means all claims, suits, judgments, damages, losses, penalties, fines, liabilities, encumbrances, liens, costs and expenses of whatever kind or nature, contingent or otherwise, matured or unmatured, foreseeable or unforeseeable, arising out of or in connection with any Environmental Condition, including, to the extent arising out of an Environmental Condition, without limitation: (A) damages for personal injury, or for injury to Project or natural resources occurring on or off the Project, including without limitation (1) any claims brought by or on behalf of any person, (2) any loss of, lost use of, damage to or diminution in value of any Project or natural resource, and (3) costs of any investigation, remediation, removal, abatement, containment, closure, restoration or monitoring work required by any federal, state or local governmental agency or political subdivision, or otherwise reasonably necessary to protect the public health or safety, whether on or off the Project; (B) reasonable fees incurred for the services of attorneys, consultants, contractors, experts and laboratories in connection with the preparation of any feasibility studies, investigations or reports or the performance of any work described above; (C) any liability to any third person or governmental agency to indemnify such person or agency for costs expended or liabilities incurred in connection with any items described in clause (A) or (B) above; (D) any fair market or fair market rental value of the Project; and (E) the amount of any penalties, damages or costs a party is required to pay or incur in excess of that which the party otherwise would reasonably have expected to pay or incur absent the existence of the applicable Environmental Condition.

(4) "Handling," when used with reference to any substance or material, includes (but is not limited to) any receipt, storage, use, generation, Release, transportation, treatment or disposal of such substance or material.

(5) "Hazardous Materials" means any and all chemical, explosive, biohazardous, radioactive or otherwise toxic or hazardous materials or hazardous wastes, including without limitation any asbestos-containing materials, PCB's, CFCs, petroleum and derivatives thereof, Radioactive Materials, Biohazardous Materials, Hazardous Wastes, any other substances defined or listed as or meeting the characteristics of a hazardous substance, hazardous material, hazardous waste, extremely hazardous waste, restricted hazardous waste, toxic substance, toxic waste, biohazardous material, biohazardous waste, biological waste, medical waste, radiation, radioactive substance, radioactive waste, or other similar term, as applicable, under any law, statute, ordinance, code, rule, regulation, directive, order, condition or other written requirement enacted, promulgated or issued by any public officer or governmental or quasi-governmental authority, whether now in force or hereafter in force at any time or from time to time to protect the environment or human health, and/or any mixed materials, substances or wastes containing more than one of the foregoing categories of materials, substances or wastes.

(6) “Hazardous Materials Laws” means, collectively, (A) the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. Sections 9601-9657, (B) the Hazardous Materials Transportation Act of 1975, 49 U.S.C. Sections 1801-1812, (C) the Resource Conservation and Recovery Act of 1976, 42 U.S.C. Sections 6901-6987 (together with any amendments thereto, any regulations thereunder and any amendments to any such regulations as in effect from time to time, “RCRA”), (D) the California Carpenter-Presley-Tanner Hazardous Substance Account Act, California Health & Safety Code Sections 25300 et seq., (E) the Hazardous Materials Release Response Plans and Inventory Act, California Health & Safety Code Sections 25500 et seq., (F) the California Hazardous Waste Control Law, California Health & Safety Code Sections 25100 et seq. (together with any amendments thereto, any regulations thereunder and any amendments to any such regulations as in effect from time to time, the “CHWCL”), (G) California Health & Safety Code Sections 25015-25027.8, (H) any amendments to or successor statutes to any of the foregoing, as adopted or enacted from time to time, (I) any regulations or amendments thereto promulgated pursuant to any of the foregoing from time to time, (J) any statutes, laws, ordinances, codes, regulations or other Legal Requirements relating to Biohazardous Materials, including (but not limited to) any regulations or requirements with respect to the shipping, use, decontamination and disposal thereof, and (K) any other Legal Requirement now or at any time hereafter in effect regulating, relating to or imposing liability or standards of conduct concerning any Hazardous Materials, including (but not limited to) any requirements or conditions imposed pursuant to the terms of any orders, permits, licenses, registrations or operating plans issued or approved, by any governmental or quasi-governmental authority from time to time either on a Project-wide basis or in connection with any Handling of Hazardous Materials in, on or about the Premises or the Project.

(7) “Hazardous Wastes” means (A) any waste listed as or meeting the identified characteristics of a “hazardous waste” or terms of similar import under RCRA, (B) any waste meeting the identified characteristics of a “hazardous waste,” “extremely hazardous waste” or “restricted hazardous waste” under the CHWCL, and/or (C) any and all other substances and materials defined or referred to as a “hazardous waste” or other term of similar import under any Hazardous Materials Laws.

(8) “Radioactive Materials” means (A) any and all substances and materials the Handling of which requires an approval, consent, permit or license from the Nuclear Regulatory Commission, (B) any and all substances and materials the Handling of which requires a Radioactive Material License or other similar approval, consent, permit or license from the State of California, and (C) any and all other substances and materials defined or referred to as “radiation,” a “radioactive material” or “radioactive waste,” or any other term of similar import under any Hazardous Materials Laws, including (but not limited to) Title 26, California Code of Regulations Section 17-30100, and any statutes, regulations or other laws administered, enforced or promulgated by the Nuclear Regulatory Commission,

(9) "Release" means any accidental or intentional spilling, leaking, pumping, pouring, emitting, discharging, injecting, escaping, dumping or disposing into the air, land, Surface water, groundwater or the environment (including without limitation the abandonment or discarding of receptacles containing any Hazardous Materials).

(10) "Tenant's Contamination" means any Hazardous Material Release on or about the Property by Tenant or /or any agents, employees, contractors, vendors, suppliers, licensees, subtenants, and invitees of Tenant (a "Tenant Party").

(11) "Landlord's Contamination" means any hazardous materials which exist in, on, under or in the vicinity of the Project as of the date of this Lease or which migrate onto or beneath the Project from offsite sources during the term of the Lease or after termination of the Lease. Tenant shall not be required to pay any costs with respect to the remediation or abatement of Landlord's Contamination.

(2) Handling of Hazardous Materials. The parties acknowledge that Tenant wishes and intends to use all or a portion of the Premises as a radio/bio-pharmaceutical, research, development, preparation and dispensing facility and otherwise for the conduct by Tenant of its business in accordance with the Use, that such Use, as conducted or proposed to be conducted by Tenant, would customarily include the Handling of Hazardous Materials, and, that Tenant shall therefore be permitted to engage in the Handling in the Premises of necessary and reasonable quantities of Hazardous Materials customarily used in or incidental to the operation of a radio/bio pharmaceutical research, preparation and dispensing facility and the other business operations of Tenant in the manner conducted or proposed to be conducted by Tenant hereunder ("Permitted Hazardous Materials"); provided that the Handling of such Permitted Hazardous Materials by all Tenant Parties shall at all times comply with and be subject to all provisions of this Lease and all Legal Requirements, including all Hazardous Materials Laws. Without limiting the generality of the foregoing, Tenant shall comply at all times with all Hazardous Materials Laws applicable to any aspect of Tenant's use of the Premises and the Project and of Tenant's operations and activities in, on and about the Premises and the Project, and shall ensure at all times that Tenant's Handling of Hazardous Materials on and about the Premises does not violate (x) the terms of any governmental licenses or permits applicable to the Building (including, but not limited to, the Building Discharge Permit as defined below) or Premises or to Tenant's Handling of any Hazardous Materials therein, or (y) any applicable requirements or restrictions relating to the occupancy classification of the Building and the Premises.

(3) Disposition or Emission of Hazardous Materials. Tenant shall not Release or dispose of any Hazardous Wastes or Hazardous Materials except to the extent authorized by permit at the Premises or on the Project, but instead shall arrange for off-site disposal, under Tenant's own name and EPA waste generator number (or other similar identifying information issued or prescribed by any other governmental authority with respect to Radioactive Materials, Biohazardous Materials or any other Hazardous Materials) and at Tenant's sole expense, in compliance with all applicable Hazardous Materials Laws, with Landlord's Rules and with all other applicable legal and regulatory requirements.

(4) Information Regarding Hazardous Materials. Tenant shall provide the following information and/or documentation to Landlord in writing prior to the Commencement Date, and thereafter shall update such information and/or documentation (x) annually, in January of each calendar year, (y) upon any material change in Tenant's Hazardous Materials inventory or in Tenant's business operations involving Hazardous Materials, and (z) at such other times as Landlord may reasonably request in writing from time to time, which updates shall reflect any material changes in such information and/or documentation:

(i) An inventory of all Hazardous Materials that Tenant receives, uses, handles, generates, transports, stores, treats or disposes of from time to time, or at the time of preparation of such inventory proposes or expects to use, handle, generate, transport, store, treat or dispose of from time to time, at the Premises. Such inventory shall include, but shall separately identify, any Hazardous Wastes, Biohazardous Materials and Radioactive Materials covered by the foregoing description. If such inventory includes any Biohazardous Materials, Tenant shall also disclose in writing to Landlord the Biosafety Level designation associated with the use of such materials.

(ii) Copies of all then existing permits, licenses, registrations and other similar documents issued by any governmental or quasi-governmental authority that authorize any Handling of Hazardous Materials in, on or about the Premises or the Project by any Tenant Party.

(iii) All Material Safety Data Sheets ("MSDSs"), if any, required to be completed with respect to operations of Tenant at the Premises from time to time in accordance with Title 26, California Code of Regulations Section 8-5194 or 42 U.S.C. Section 11021, or any amendments thereto, and any Hazardous Materials Inventory Sheets that detail the MSDSs.

(iv) All hazardous waste manifests (as defined in Title 26, California Code of Regulations Section 22-66481), if any, that Tenant is required to complete from time to time in connection with its operations at the Premises.

(v) A copy of any Hazardous Materials Business Plan required from time to time with respect to Tenant's operations at the Premises pursuant to California Health & Safety Code Sections 25500 et seq., and any regulations promulgated thereunder, as amended from time to time, or in connection with Tenant's application for a business license from the City of Emeryville. If applicable law does not require Tenant to prepare a Hazardous Materials Business Plan, Tenant shall furnish to Landlord at the times and in the manner set forth above the information that would customarily be contained in a Hazardous Materials Business Plan, including (but not limited to) information regarding Tenant's Hazardous Materials inventories. The parties acknowledge that a Hazardous Materials Business Plan would ordinarily include an emergency response plan, and that regardless of whether applicable law requires Tenant or other tenants in the Building to prepare Hazardous Materials Business Plans, Landlord in its discretion may elect to prepare a coordinated emergency response plan for the entire Building and/or for multiple Buildings on the Project.

(vi) Any Contingency Plans and Emergency Procedures required of Tenant from time to time, in connection with its operations at the Premises, pursuant to applicable law, Title 26, California Code of Regulations Sections 22-67140 et seq., and any amendments thereto, and any Training Programs and Records required under Title 26, California Code of Regulations Section 22-66493, and any amendments thereto from time to time. Landlord in its discretion may elect to prepare a Contingency Plan and Emergency Procedures for the entire Building and/or for multiple Buildings on the Project, in which event, if applicable law does not require Tenant to prepare a Contingency Plan and Emergency Procedures for its operations at the Premises, Tenant shall furnish to Landlord at the times and in the manner set forth above the information that would customarily be contained in a Contingency Plan and Emergency Procedures.

(vii) Copies of any biennial or other periodic reports furnished or required to be furnished to the California Department of Health Services from time to time, under applicable law, pursuant to Title 26, California Code of Regulations Section 22-66493 and any amendments thereto, relating to any Hazardous Materials.

(viii) Copies of any industrial wastewater discharge permits issued to or held by Tenant from time to time in connection with its operations at the Premises (the parties presently anticipate, however, that because of the existence of the Building Discharge Permit in Landlord's name as described above, Tenant will not be required to maintain a separate, individual discharge permit).

(ix) Copies of any other lists, reports, studies, or inventories of Hazardous Materials or of any subcategories of materials included in Hazardous Materials that Tenant is otherwise required to prepare and file from time to time with any governmental or quasi-governmental authority in connection with Tenant's operations at the Premises, including (but not limited to) reports filed by Tenant with the federal Food & Drug Administration or any other regulatory authorities primarily in connection with the presence (or lack thereof) of any "select agents" or other Biohazardous Materials on the Premises, together with proof of filing thereof.

(x) Any other information reasonably requested by Landlord in writing from time to time in connection with (A) Landlord's monitoring (in Landlord's reasonable discretion) and enforcement of Tenant's obligations under this Section and of compliance with applicable Legal Requirements in connection with any Handling or Release of Hazardous Materials in the Premises or Building or on or about the Project by any Tenant Party, (B) any inspections or enforcement actions by any governmental authority pursuant to any Hazardous Materials Laws or any other Legal Requirements relating to the presence or Handling of Hazardous Materials in the Premises or Building or on or about the Project by any Tenant Party, and/or (C) Landlord's preparation (in Landlord's discretion) and enforcement of any reasonable rules and procedures relating to the presence or Handling by Tenant or any Tenant Party of Hazardous Materials in the Premises or Building or on or about the Project, including (but not limited to) any contingency plans or emergency response plans as described above. Except as otherwise required by Law, Landlord shall keep confidential any information supplied to Landlord by Tenant pursuant to the foregoing, provided, however, that the foregoing shall not apply to any information filed with any governmental authority or available to the public at large. Landlord may provide such information to its lenders, consultants or investors provided such entities agree to keep such information confidential.

(5) Indemnification; Notice of Release. Tenant shall be responsible for and shall indemnify, defend and hold Landlord harmless from and against all Environmental Damages to the extent arising out of or in connection with, or otherwise relating to, (i) any Handling of Hazardous Materials by any Tenant Party in, on or about the Premises or the Project in violation of this Section, (ii) any breach of Tenant's obligations under this Section or of any Hazardous Materials Laws by any Tenant Party, or (iii) the existence of any Tenant Contamination in, on or about the Premises or the Project to the extent caused by any Tenant Party, including without limitation any removal, cleanup or restoration work and materials necessary to return the Project or any improvements of whatever nature located on the Project to the condition existing prior to the Handling of Hazardous Materials in, on or about the Premises or the Project by any Tenant Party. In the event of any Tenant Contamination in, on or about the Premises or any other portion of the Project or any adjacent lands, Tenant shall promptly remedy the problem in accordance with all applicable Hazardous Materials Laws and Legal Requirements, shall give Landlord oral notice of any such non-standard or non-customary Release promptly after Tenant becomes aware of such Release, followed by written notice to Landlord within five (5) days after Tenant becomes aware of such Release, and shall furnish Landlord with concurrent copies of any and all notices, reports and other written materials filed by any Tenant Party with any governmental authority in connection with such Release. Landlord shall be responsible for and shall indemnify and hold Tenant harmless from and against all costs of any Environmental Damages which arise during or after the Term of this Lease, as a result of the presence of, any Release of or the Handling of any Hazardous Material in, on, about or under the Premises, Building or Property, except to the extent provided for in this Section 7(e); provided that Tenant shall have the burden of reasonably demonstrating that such Hazardous Materials were not of the type used by Tenant in the Premises. Tenant shall be conclusively presumed to have met its burden to the extent that any hazardous materials are identified as being present in any environmental report or other data on the date of commencement of this Lease and are not used by Tenant. Tenant shall have no obligation to remedy any Hazardous Materials contamination which was not caused or released by a Tenant Party.

(6) Governmental Notices. Tenant shall promptly provide Landlord with copies of all notices received by Tenant relating to any actual or alleged presence or Handling by any Tenant Party of Hazardous Materials in, on or about the Premises or any other portion of the Project, including, without limitation, any notice of violation, notice of responsibility or demand for action from any federal, state or local governmental authority or official in connection with any actual or alleged presence or Handling by any Tenant Party of Hazardous Materials in or about the Premises or any other portion of the Project.

(7) Inspection by Landlord. In addition to, and not in limitation of, Landlord's rights under this Lease, upon reasonable prior request by Landlord, Tenant shall grant Landlord and its consultants, as well as any governmental authorities having jurisdiction over the Premises or over any aspect of Tenant's use thereof, reasonable access to the Premises at reasonable times to inspect Tenant's Handling of Hazardous Materials in, on and about the Premises, and Landlord shall not thereby incur any liability to Tenant or be deemed guilty of any disturbance of Tenant's

use or possession of the Premises by reason of such entry; provided, however that Landlord shall use reasonable efforts to minimize interference with Tenant's use of the Premises caused by such entry. Landlord shall comply with any security precaution reasonably imposed by Tenant during any entry onto the Premises and shall minimize to the extent reasonably possible any interference with Tenant's use of the Premises caused by such entry. Notwithstanding Landlord's rights of inspection and review of documents, materials and physical conditions under this Section with respect to Tenant's Handling of Hazardous Materials, Landlord shall have no duty or obligation to perform any such inspection or review or to monitor in any way any documents, materials, physical conditions or compliance with Legal Requirements in connection with Tenant's Handling of Hazardous Materials, and no third Party shall be entitled to rely on Landlord to conduct any such inspection, review or monitoring by reason of the provisions of this Section.

(8) Monitoring by Landlord. Landlord reserves the absolute right to monitor, in Landlord's reasonable discretion and at Landlord's cost (the reasonable cost of which shall be recoverable as an Operating Expense hereunder (except in the case of a breach of any of Tenant's obligations under this Section, in which event such monitoring costs may be charged back entirely to Tenant and shall be reimbursed by Tenant to Landlord within ten (10) days after written demand by Landlord from time to time, accompanied by supporting documentation reasonably evidencing the costs for which such reimbursement is claimed), at such times and from time to time as Landlord in its reasonable discretion may determine, through consultants engaged by Landlord or otherwise as Landlord in its reasonable discretion may determine, (x) all aqueous and atmospheric discharges and emissions from the Premises during the Term by a Tenant Party, (y) Tenant's compliance and the collective compliance of all tenants in the Building with requirements and restrictions relating to the occupancy classification of the Building (including, but not limited to, Hazardous Materials inventory levels of Tenant and all other tenants in the Building), and (z) Tenant's compliance with all other requirements of this Section.

(9) Discovery of Discharge. If Landlord, Tenant or any governmental or quasi-governmental authority discovers any Release from the Premises during the Term by a Tenant Party in violation of this Section that, in Landlord's reasonable determination, jeopardizes the ability of the Building or the Project to meet applicable Legal Requirements or otherwise adversely affects the Building's or the Project's compliance with applicable discharge or emission standards, or if Landlord discovers any other breach of Tenant's obligations under this Section, then upon receipt of written notice from Landlord or at such earlier time as Tenant obtains actual knowledge of the applicable discharge, emission or breach, Tenant at its sole expense shall within a reasonable time (x) in the case of a Release in violation of this Lease, cease the applicable discharge or emission and remediate any continuing effects of the discharge or emission until such time, if any, as Tenant demonstrates to Landlord's reasonable satisfaction that the applicable discharge or emission is in compliance with all applicable Legal Requirements and any other applicable regulatory commitments and obligations to the satisfaction of the appropriate governmental agency with jurisdiction over the release, and (y) in the case of any other breach of Tenant's obligations under this Section, take such corrective measures as Landlord may reasonably request in writing in order to cure or eliminate the breach, as promptly as practicable and to remediate any continuing effects of the breach.

(10) Post-Occupancy Study. If Tenant or any Tenant Party Handles any Hazardous Materials in, on or about the Premises or the Project during the Term of this Lease, then no later than thirty (30) days prior to the termination or expiration of this Lease, Tenant at its sole cost and expense shall obtain and deliver to Landlord an environmental study, performed by an expert reasonably satisfactory to Landlord, evaluating, the presence or absence of any Tenant Contamination in, on and about the Premises and the Property. Such study shall be based on a reasonable and prudent level of tests and investigations of the Premises and surrounding portions of the Project (if appropriate) which tests shall be conducted no earlier than the date of termination or expiration of this Lease. Liability for any remedial actions required or recommended on the basis of such study shall be allocated in accordance with the applicable provisions of this Lease. To the extent any such remedial actions are the responsibility of Tenant, Tenant at its sole expense shall promptly commence and diligently pursue to completion the required remedial actions.

(11) Emergency Response Plans. If Landlord in its reasonable discretion adopts any emergency response plan and/or any Contingency Plan and Emergency Procedures for the Building or for multiple Buildings on the Project as contemplated above, Landlord shall provide copies of any such plans and procedures to Tenant and, so long as such plans and procedures are reasonable and do not unreasonably interfere with Tenant's Use at or access to the Premises or materially increase the cost incurred by Tenant with respect to the Premises, Tenant shall comply with all of the requirements of such plans and procedures to the extent applicable to Tenant and/or the Premises. If Landlord elects to adopt or materially modify any such plans or procedures that apply to the Building during the Term of this Lease, Landlord shall consult with Tenant in the course of preparing such plans, procedures or modifications in order to try to ensure that they will accurately reflect and be consistent with Tenant's operations in the Premises, but Landlord alone shall determine, in its good faith reasonable discretion, the appropriate scope of such consultation and nothing in this paragraph shall be construed to give Tenant any right of approval or disapproval over Landlord's adoption or modification of any such plans or procedures so long as such, plans and procedures are reasonable and do not unreasonably interfere with Tenant's Use at or access to the Premises or materially increase the cost incurred by Tenant with respect to the Premises.

(12) Radioactive Materials. Without limiting any other applicable provisions of this Section, if Tenant Handles or proposes to Handle any Radioactive Materials in or about the Premises, Tenant shall provide Landlord with copies of Tenant's licenses or permits for such Radioactive Materials and with copies of all radiation protection programs and procedures required under applicable Legal Requirements or otherwise adopted by Tenant from time to time in connection with Tenant's Handling of such Radioactive Materials. In addition, Tenant shall comply with any and all rules and procedures issued by Landlord in its good faith discretion from time to time with respect to the Handling of Radioactive Materials on the Project (such as, by way of example but not limitation, rules implementing a label defacement program for decayed waste destined for common trash and/or rules relating to transportation and storage of Radioactive Materials on the Project), provided that such rules and procedures shall be reasonable and not in conflict with any applicable Legal Requirements.

(13) Deemed Holdover Occupancy. Notwithstanding any other provisions of this Lease, Tenant expressly agrees as follows:

(i) If Tenant Handles any Radioactive Materials in or about the Premises during the term of this Lease, then for so long as any license or permit relating to such Radioactive Materials remains open following any otherwise applicable termination or expiration of the Term of this Lease and another entity handling Radioactive Materials which is a prospective tenant of Landlord is legally prohibited from occupying a portion of the Premises for a use similar to the Use, then and in such event, Tenant shall be deemed to be occupying that portion of the Premises on a holdover basis without Landlord's consent (notwithstanding such otherwise applicable termination or expiration of the Term of this Lease) and shall be required to continue to pay Rent and other charges in accordance with the holdover provisions of this Lease solely for that portion of the premises which is covered by the radioactive materials license, until such time as all such Radioactive Materials licenses and permits have been fully closed out in accordance with the requirements of this Lease and with all applicable Hazardous Materials Laws and other Legal Requirements.

(ii) If Tenant Handles any Hazardous Materials in or about the Premises during the term of this Lease and, at the otherwise applicable termination or expiration of the Term of this Lease, Tenant has failed to remove from the Premises and the Building all known Hazardous Materials Handled by a Tenant Party or has failed to complete any remediation or removal of Tenant's Contamination and/or to have fully remediated, in compliance with the requirements of this Lease and with all applicable Hazardous Materials Laws and other Legal Requirements, the Tenant's Handling and/or Release (if applicable) of any such Hazardous Materials during the Term of this Lease, then for so long as such circumstances continue to exist, Tenant shall be deemed to be occupying the Premises on a holdover basis without Landlord's consent (notwithstanding such otherwise applicable termination or expiration of the Term of this Lease) and shall be required to continue pay Rent and other charges in accordance with the holdover provisions of this Lease until such time as all such circumstances have been fully resolved in accordance with the requirements of this Lease and with all applicable Hazardous Materials Laws and other Legal Requirements.

(14) Survival of Obligations. Each party's obligations under this Section shall survive the expiration or other termination of this Lease and shall survive any conveyance by Landlord of its interest in the Premises. The provisions of this Section and any exercise by either party of any of the rights and remedies contained herein shall be without prejudice to any other rights and remedies that such party may have under this Lease or under applicable law with respect to any Environmental Conditions and/or any Hazardous Materials with respect to any breach of the other party's obligations under this Section. Either party's exercise or failure to exercise, at any time or from time to time, any or all of the rights granted in this Section shall not in any way impose any liability on such party or shift from the other party to such party any responsibility or obligation imposed upon the other party under this Lease or under applicable law with respect to Hazardous Materials, Environmental Conditions and/or compliance with Legal Requirements.

(15) Laboratory Rules and Regulations. Tenant agrees for itself and for its subtenants, employees, agents, and invitees to comply with the laboratory rules and regulations ("Laboratory Rules and Regulations") attached to this Lease as Exhibit C-1 and with all reasonable modifications and additions thereto which Landlord may make from time to time.

7.2 LANDLORD ACCESS TO PREMISES; APPROVALS

(a) Tenant shall permit Landlord to erect, use and maintain pipes, ducts, wiring and conduits in and through the Premises, so long as Tenant's use, layout or design of the Premises is not materially affected or altered. Landlord or Landlord's agents shall have the right to enter upon the Premises (i) without notice, in the event of an emergency, or (ii) upon not less than forty eight (48) hours' prior written notice and during normal business hours (except in the event of an emergency), to (A) perform, janitorial and other services required under this Lease, (B) conduct safety and other testing in the Premises and (C) make such repairs, alterations, improvements or additions to the Premises or the Building or other parts of the Property as Landlord may deem necessary or desirable (including all alterations, improvements and additions in connection with a change in service provider or providers) and, in all cases, subject to the terms and conditions set forth in this Lease. Notwithstanding the foregoing, Janitorial and cleaning services shall be performed after normal business hours. Any entry or work by Landlord shall be during normal business hours unless otherwise agreed by Tenant and Landlord shall use commercially reasonable efforts to ensure that any Landlord's entry or work shall not materially interfere with Tenant's occupancy of the Premises.

(b) Landlord may enter the Premises for the purpose of conducting such inspections, tests and studies as Landlord may deem desirable or necessary to confirm Tenant's compliance with all Laws and Environmental Laws or for other purposes necessary in Landlord's reasonable judgment to ensure the sound condition of the Property and the systems serving the Property. Landlord's rights under this Section 7.2(b) are for Landlord's own protection only, and Landlord has not, and shall not be deemed to have assumed, any responsibility to Tenant or any other party as a result of the exercise or non-exercise of such rights, for compliance with Laws or Environmental Laws or for the accuracy or sufficiency of any item or the quality or suitability of any item for its intended use.

(c) Landlord may do any of the foregoing, or undertake any of the inspection or work described in the preceding paragraphs without such action constituting an actual or constructive eviction of Tenant, in whole or in part, or giving rise to an abatement of Rent by reason of loss or interruption of business of the Tenant, or otherwise.

(d) The review, approval or consent of Landlord with respect to any item required or permitted under this Lease is for Landlord's own protection only, and Landlord has not, and shall not be deemed to have assumed, any responsibility to Tenant or any other party, as a result of the exercise or non-exercise of such rights, for compliance with Laws or Environmental Laws or for the accuracy or sufficiency of any item or the quality or suitability of any item for Its Intended use.

7.3 QUIET ENJOYMENT

Landlord covenants, in lieu of any implied covenant of quiet possession or quiet enjoyment, that so long as Tenant is in compliance with the covenants and conditions set forth in this Lease, Tenant shall have the right to quiet enjoyment of the Premises without hindrance or interference from Landlord or those claiming through Landlord, and subject to the covenants and conditions set forth in the Lease and to the rights of any Mortgagee or ground lessor.

ARTICLE 8 MAINTENANCE

8.1 LANDLORD'S MAINTENANCE

Subject to the provisions of Articles 4 and 14, Landlord shall maintain and make necessary repairs to the foundations, roofs, exterior walls, and the structural elements of the Building, the electrical, plumbing, heating, ventilating, air-conditioning, mechanical, communication, security and the fire and life safety systems of the Building and those corridors, washrooms and lobbies which are Common Areas of the Building, except that: (a) Landlord shall not be responsible for the maintenance or repair of any floor or wall coverings in the Premises or any of such systems which are located within the Premises and are supplemental or special to the Building's standard systems; and (b) the cost of performing any of said maintenance or repairs whether to the Premises or to the Building caused by the negligence of Tenant, its employees, agents, servants, licensees, subtenants, contractors or invitees, shall be paid by Tenant, subject to the waivers set forth in Section 16.4. Landlord shall not be liable to Tenant for any expense, injury, loss or damage resulting from work done in or upon, or in connection with the use of, any adjacent or nearby building, land, street or alley, unless caused by the gross negligence or willful misconduct of Landlord, its employees, agents or contractors.

8.2 TENANT'S MAINTENANCE

Tenant shall periodically inspect the Premises to identify any conditions that are dangerous or in need of maintenance or repair. Tenant shall promptly provide Landlord with notice of any such conditions. Tenant shall, at its sole cost and expense, perform all maintenance and repairs to the Premises that are not Landlord's express responsibility under this Lease, and keep the Premises in good condition and repair, reasonable wear and tear excepted. Tenant's repair and maintenance obligations include, without limitation, repairs to: (a) floor covering; (b) interior partitions; (c) doors; (d) the interior side of demising walls; (e) electronic, phone and data cabling and related equipment that is installed by or for the exclusive benefit of Tenant (collectively, "Cable"); (f) supplemental air conditioning units, kitchens, including hot water heaters, plumbing, and similar facilities exclusively serving Tenant; and (g) Alterations. To the extent Landlord is not reimbursed by insurance proceeds, Tenant shall reimburse Landlord for the cost of repairing damage to the Building caused by the acts of Tenant, Tenant Related Parties and their respective contractors and vendors. If Tenant fails to make any repairs to the Premises for more than thirty (30) days after notice from Landlord (although notice shall not be required in an emergency), Landlord may make the repairs, and Tenant shall pay the reasonable cost of the repairs, together with an administrative charge in an amount equal to 10% of the cost of the repairs. Tenant hereby waives all right to make repairs at the expense of Landlord or in lieu thereof to vacate the Premises and its other similar rights as provided in California Civil Code Sections 1932(1), 1941 and 1942 or any other Legal Requirement (whether now or hereafter in effect). In addition to the foregoing, Tenant shall be responsible for repairing all special tenant fixtures and improvements, including garbage disposals, showers, plumbing, and appliances.

**ARTICLE 9
ALTERATIONS AND IMPROVEMENTS**

9.1 TENANT ALTERATIONS

(a) Except for completion of Landlord Work undertaken by Landlord pursuant to the Workletter, the following provisions shall apply to the completion of any Tenant Alterations:

(1) Tenant shall not, except as provided herein, without the prior written consent of Landlord, which consent shall not be unreasonably withheld, make or cause to be made any Tenant Alterations in or to the Premises or any Property systems serving the Premises. Prior to making any Tenant Alterations, Tenant shall give Landlord ten (10) days prior written notice (or such earlier notice as would be necessary pursuant to applicable Law) to permit Landlord sufficient time to post appropriate notices of non-responsibility. Subject to all other requirements of this Article 9, Tenant may undertake Decoration work without Landlord's prior written consent. Tenant shall furnish Landlord with the names and addresses of all contractors and subcontractors and copies of all contracts. All Tenant Alterations shall be completed at such time and in such manner as Landlord may from time to time designate, and only by contractors or mechanics approved by Landlord, which approval shall not be unreasonably withheld, provided, however, that Landlord may, in its sole discretion, specify the engineers and contractors to perform all work relating to the Building's systems (including the mechanical, heating, plumbing, security, ventilating, air-conditioning, electrical, communication and the fire and life safety systems in the Building). The contractors, mechanics and engineers who may be used are further limited to those whose work will not cause or threaten to cause disharmony or interference with Landlord or other tenants in the Building and their respective agents and contractors performing work in or about the Building. Landlord may farther condition its consent upon Tenant furnishing to Landlord and Landlord approving prior to the commencement of any work or delivery of materials to the Premises related to the Tenant Alterations such of the following as specified by Landlord: architectural plans and specifications, opinions from Landlord's engineers stating that the Tenant Alterations will not in any way adversely affect the Building's systems, necessary permits and licenses, certificates of insurance, and such other documents in such form reasonably requested by Landlord. Landlord may, in the exercise of reasonable judgment, request that Tenant provide Landlord with appropriate evidence of Tenant's ability to complete and pay for the completion of the Tenant Alterations such as a performance bond or letter of credit. Upon completion of the Tenant Alterations, Tenant shall deliver to Landlord an as-built digitized (if available) set of plans and specifications for the Tenant Alterations.

(2) Tenant shall pay the cost of all Tenant Alterations and the cost of decorating the Premises and any work to the Property occasioned thereby. Upon completion of Tenant Alterations, Tenant shall furnish Landlord with contractors' affidavits and full and final waivers of lien and receipted bills covering all labor and materials expended and used in connection therewith and such other documentation reasonably requested by Landlord or Mortgagee.

(3) Tenant agrees to complete all Tenant Alterations (i) in accordance with all Laws, Environmental Laws, all requirements of applicable insurance companies and in accordance with Landlord's standard construction rules and regulations, and (ii) in a good and workmanlike manner with the use of good grades of materials. Tenant shall notify Landlord immediately if Tenant receives any notice of violation of any Law in connection with completion of any Tenant Alterations and shall immediately take such steps as are necessary to remedy such violation. In no event shall such supervision or right to supervise by Landlord nor shall any approvals given by Landlord under this Lease constitute any warranty by Landlord to Tenant of the adequacy of the design, workmanship or quality of such work or materials for Tenant's intended use or of compliance with the requirements of Section 9.1(a)(3)(i) and (ii) above or impose any liability upon Landlord in connection with the performance of such work.

(b) All Landlord Work and Tenant Additions whether installed by Landlord or Tenant, shall without compensation or credit to Tenant, become part of the Premises and the property of Landlord at the time of their installation and shall remain in the Premises, unless pursuant to Article 12, Tenant may remove them or is required to remove them at Landlord's request.

9.2 LIENS

Tenant shall not permit any lien or claim for lien of any mechanic, laborer or supplier or any other lien to be filed against the Building, the Land, the Premises, or any other part of the Property arising out of work performed, or alleged to have been performed by, or at the direction of, or on behalf of Tenant; provided that Tenant shall have no obligation for liens or encumbrances caused by Landlord even if such liens or encumbrances arise out of work done on behalf of or for the benefit of Tenant. If any such lien or claim for lien is filed, Tenant shall within fifteen (15) days of receiving notice of such lien or claim (a) have such lien or claim for lien released of record or (b) deliver to Landlord a bond in form, content, amount, and issued by surety, satisfactory to Landlord, indemnifying, protecting, defending and holding harmless the Indemnitees against all costs and liabilities resulting from such lien or claim for lien and the foreclosure or attempted foreclosure thereof. If Tenant fails to take any of the above actions, Landlord, in addition to its rights and remedies under Article 11, without investigating the validity of such lien or claim for lien, may pay or discharge the same and Tenant shall, as payment of additional Rent hereunder, reimburse Landlord upon demand for the amount so paid by Landlord, including Landlord's expenses and attorneys' fees.

ARTICLE 10
ASSIGNMENT AND SUBLETTING

10.1 ASSIGNMENT AND SUBLETTING

(a) Without the prior written consent of Landlord, which shall not be unreasonably withheld, conditioned or delayed, Tenant may not sublease, assign, mortgage, pledge, hypothecate or otherwise transfer or permit the transfer of this Lease or the encumbering of Tenant's interest therein in whole or in part, by operation of Law or otherwise or permit the use or occupancy of the Premises, or any part thereof, by anyone other than Tenant; provided, however, if Landlord chooses not to recapture the space proposed to be subleased or assigned as provided in Section 10.2, Landlord shall not unreasonably withhold its consent to a subletting or assignment under this Section 10.1. Tenant agrees that the provisions governing sublease and assignment set forth in this Article 10 shall be deemed to be reasonable. If Tenant desires to enter into any sublease of the Premises or assignment of this Lease, Tenant shall deliver written notice thereof to Landlord ("Tenant's Notice"), together with the identity of the proposed subtenant or assignee and the proposed principal terms thereof and financial and other information sufficient for Landlord to make an informed judgment with respect to such proposed subtenant or assignee at least fifteen (15) days prior to the commencement date of the term of the proposed sublease or assignment. If Tenant proposes to sublease less than all of the Rentable Area of the Premises, the space proposed to be sublet and the space retained by Tenant must each be a marketable unit as reasonably determined by Landlord and otherwise in compliance with all Laws. Landlord shall notify Tenant in writing of its approval or disapproval of the proposed sublease or assignment or its decision to exercise its rights under Section 10.2 within ten (10) days after receipt of Tenant's Notice (and all required information). Tenant shall submit for Landlord's approval (which approval shall not be unreasonably withheld) any advertising which Tenant or its agents intend to use with respect to the space proposed to be sublet.

(b) With respect to Landlord's consent to an assignment or sublease, Landlord may take into consideration any factors that Landlord may deem relevant, and the reasons for which Landlord's denial shall be deemed to be reasonable shall include, without limitation, the following:

- (1) the business reputation or creditworthiness of any proposed subtenant or assignee is not acceptable to Landlord; or
- (2) in Landlord's reasonable judgment the proposed assignee or sublessee would diminish the value or reputation of the Building or Landlord; or
- (3) any proposed assignee's or sublessee's use of the Premises would violate Section 7.1 of the Lease or would violate the provisions of any other leases of tenants in the Project; or
- (4) the proposed sublessee or assignee is a bona fide prospective tenant of Landlord in the Project as demonstrated by a written proposal dated within ninety (90) days prior to the date of Tenant's request; or
- (5) the proposed sublessee or assignee would materially increase the estimated pedestrian and vehicular traffic to and from the Premises and the Building.

(c) Any sublease or assignment shall be expressly subject to the terms and conditions of this Lease. Any subtenant or assignee shall execute such documents as Landlord may reasonably require to evidence such subtenant or assignee's assumption of the obligations and liabilities of Tenant under this Lease. Tenant shall deliver to Landlord a copy of all agreements

executed by Tenant and the proposed subtenant and assignee with respect to the Premises. Landlord's approval of a sublease, assignment, hypothecation, transfer or third party use or occupancy shall not constitute a waiver of Tenant's obligation to obtain Landlord's consent to further assignments or subleases, hypothecations, transfers or third party use or occupancy.

(d) So long as Tenant is not entering into a transaction described herein for the purpose of avoiding or otherwise circumventing the remaining terms of this Article, Tenant may, subject to Section 10.5, assign its entire interest under this Lease or Sublease all or a portion of the Premises, without the consent of Landlord, to (i) an Affiliate, or (ii) a successor to Tenant by purchase or other acquisition of Tenant's capital stock or substantially all of Tenant's assets, merger, consolidation or reorganization, provided that all of the following conditions are satisfied: (1) Tenant is not then in Default under this Lease; (2) Tenant shall give Landlord written notice at least fifteen (15) days prior to the effective date of the proposed transfer together with the information required hereunder and such entity shall expressly assume Tenant's obligations hereunder; (3) with respect to an assignment to an Affiliate, Tenant continues to have a net worth equal to or greater than Tenant's net worth at the date immediately prior to such transfer; and (4) with respect to a purchase, merger, consolidation or reorganization which results in Tenant ceasing to exist as a separate legal entity, Tenant's successor shall have a net worth equal to Tenant's net worth at the date immediately prior to such transfer.

10.2 RECAPTURE

Landlord shall have the option to exclude from the Premises covered by this Lease ("recapture") the space proposed to be sublet or subject to the assignment, effective as of the proposed commencement date of such sublease or assignment. If Landlord elects to recapture, Tenant shall have the right to revoke the request to so sublet or assign, in which case, the Premises shall not be transferred and this Lease will remain in full force and effect with respect to the entirety of the Premises then-existing as of the date of such request for consent by Tenant. If Landlord elects to recapture and Tenant has not revoked its request for consent, Tenant shall surrender possession of the space proposed to be subleased or subject to the assignment to Landlord on the effective date of recapture of such space from the Premises, such date being the Termination Date for such space. Effective as of the date of recapture of any portion of the Premises pursuant to this section, the Monthly Base Rent, Rentable Area of the Premises and Tenant's Share shall be adjusted accordingly.

10.3 EXCESS RENT

Tenant shall pay Landlord on the first day of each month during the term of the sublease or assignment, fifty percent (50%) of the amount by which the sum of all rent and other consideration (direct or indirect) due from the subtenant or assignee for such month exceeds: (i) that portion of the Monthly Base Rent and Rent Adjustments due under this Lease for said month which is allocable to the space sublet or assigned; and (ii) the following costs and expenses for the subletting or assignment of such space: (1) brokerage commissions and attorneys' fees and expenses, (2) the actual costs paid in making any improvements or substitutions in the Premises required by any sublease or assignment; and (3) "free rent" periods, costs of any inducements or concessions given to subtenant or assignee, moving costs, and other amounts in respect of such subtenant's or assignee's other leases or occupancy arrangements. All such costs and expenses shall be amortized over the term of the sublease or assignment pursuant to sound accounting principles.

10.4 TENANT LIABILITY

In the event of any sublease or assignment, Tenant shall not be released or discharged from any liability, whether past, present or future, under this Lease, including any liability arising from the exercise of any renewal or expansion option, to the extent such exercise is expressly permitted by Landlord. If the transferee or subtenant, as the case may be, does not expressly assume the obligations of Tenant under this Lease and/or fails to satisfy the net worth requirements set forth in Section 10.1(d), Tenant's liability shall remain primary, and in the event of default by any subtenant, assignee or successor of Tenant in performance or observance of any of the covenants or conditions of this Lease, Landlord may proceed directly against Tenant without the necessity of exhausting remedies against said subtenant, assignee or successor. After any assignment, Landlord may consent to subsequent assignments or subletting of this Lease, or amendments or modifications of this Lease with assignees of Tenant, without notifying Tenant, or any successor of Tenant, and without obtaining its or their consent thereto, and such action shall not relieve Tenant or any successor of Tenant of liability under this Lease, as applicable. If Landlord grants consent to such sublease or assignment, Tenant shall pay all reasonable attorneys' fees and expenses incurred by Landlord with respect to such assignment or sublease. In addition, if Tenant has any options to extend the Term or to add other space to the Premises, such options shall not be available to any subtenant or assignee, directly or indirectly without Landlord's express written consent, which may be withheld in Landlord's sole discretion.

10.5 ASSUMPTION AND ATTORNTMENT

If Tenant shall assign this Lease as permitted herein, the assignee shall expressly assume all of the obligations of Tenant hereunder in a written instrument satisfactory to Landlord and furnished to Landlord not later than fifteen (15) days prior to the effective date of the assignment. If Tenant shall sublease the Premises as permitted herein, Tenant shall, at Landlord's option, within fifteen (15) days following any request by Landlord, obtain and furnish to Landlord the written agreement of such subtenant to the effect that the subtenant will attorn to Landlord and will pay all subrent directly to Landlord.

10.6 PROCESSING EXPENSES

Tenant shall pay to Landlord, as Landlord's cost of processing each proposed assignment or subletting (whether or not the same is ultimately approved by Landlord or consummated by Tenant), an amount equal to the sum of (i) Landlord's reasonable attorneys' and other professional fees, plus (ii) the sum of 1,500.00 for the cost of Landlord's administrative, accounting and clerical time (collectively, "Processing Costs"). Notwithstanding anything to the contrary herein, Landlord shall not be required to process any request for Landlord's consent to an assignment or subletting until Tenant has paid to Landlord the amount of Landlord's estimate of the Processing Costs. When the actual amount of the Processing Costs is determined, it shall be reconciled with Landlord's estimate, and any payments or refunds required as a result thereof shall promptly thereafter be made by the parties.

ARTICLE 11
DEFAULT AND REMEDIES

11.1 EVENTS OF DEFAULT

The occurrence or existence of any one or more of the following shall constitute a "Default" by Tenant under this Lease:

(1) Tenant fails to pay any installment or other payment of Rent including Rent Adjustment Deposits or Rent Adjustments within five (5) days after the date when due;

(2) Tenant fails to observe or perform any of the other covenants, conditions or provisions of this Lease or the Workletter and fails to cure such default within thirty (30) days after written notice thereof to Tenant, unless the default involves a hazardous condition, which shall be cured forthwith or unless the failure to perform is a Default for which this Lease specifies there is no cure or grace period. Notwithstanding the foregoing, if any such cure cannot be completed within such thirty (30) day period, Tenant shall have such longer period as is needed to complete such cure so long as the cure is commenced within such thirty (30) day period and is diligently pursued to completion;

(3) the interest of Tenant in this Lease is levied upon under execution or other legal process;

(4) a petition is filed by or against Tenant to declare Tenant bankrupt or seeking a plan of reorganization or arrangement under any Chapter of the Bankruptcy Act, or any amendment, replacement or substitution therefor, or to delay payment of, reduce or modify Tenant's debts, which in the case of an involuntary action is not discharged within thirty (30) days;

(5) Tenant is declared insolvent by Law or any assignment of Tenant's property is made for the benefit of creditors;

(6) a receiver is appointed for Tenant or Tenant's property, which appointment is not discharged within thirty (30) days;

(7) any action taken by or against Tenant to reorganize or modify Tenant's capital structure in a materially adverse way which in the case of an involuntary action is not discharged within thirty (30) days;

(8) upon the dissolution of Tenant; or

(9) if Tenant fails to pay Rent when due three times within the then-current lease Year (whether or not such failure or breach is thereafter cured within any stated cure or grace period or statutory period).

11.2 LANDLORD'S REMEDIES

(a) A Default shall constitute a breach of the Lease for which Landlord shall have the rights and remedies set forth in this Section 11.2 and all other rights and remedies set forth in this Lease or now or hereafter allowed by Law, whether legal or equitable, and all rights and remedies of Landlord shall be cumulative and none shall exclude any other right or remedy now or hereafter allowed by applicable Law,

(b) With respect to a Default, at any time Landlord may terminate Tenant's right to possession by written notice to Tenant stating such election. Any written notice required pursuant to Section 11.1 shall constitute notice of unlawful detainer pursuant to California Code of Civil Procedure Section 1161 if, at Landlord's sole discretion, it states Landlord's election that Tenant's right to possession is terminated after expiration of any period required by Law or any longer period required by Section 11.1. Upon the expiration of the period stated in Landlord's written notice of termination (and unless such notice provides an option to cure within such period and Tenant cures the Default within such period), Tenant's right to possession shall terminate and this Lease shall terminate, and Tenant shall remain liable as hereinafter provided. Upon such termination in writing of Tenant's right to possession, Landlord shall have the right, subject to applicable Law, to re-enter the Premises and dispossess Tenant and the legal representatives of Tenant and all other occupants of the Premises by unlawful detainer or other summary proceedings, or as otherwise permitted by Law, regain possession of the Premises and remove their property (including their trade fixtures, personal property and those Tenant Additions which Tenant is required or permitted to remove under Article Twelve), but Landlord shall not be obligated to effect such removal, and such property may, at Landlord's option, be stored elsewhere, sold or otherwise dealt with as permitted by Law, at the risk of, expense of and for the account of Tenant, and the proceeds of any sale shall be applied pursuant to Law. Landlord shall in no event be responsible for the value, preservation or safekeeping of any such property. Tenant hereby waives all claims for damages that may be caused by Landlord's removing or storing Tenant's personal property pursuant to this Section or Section 12.1, and Tenant hereby indemnifies, and agrees to defend, protect and hold harmless, the Indemnitees from any and all loss, claims, demands, actions, expenses, liability and cost (including attorneys' fees and expenses) arising out of or in any way related to such removal or storage. Upon such written termination of Tenant's right to possession and this Lease, Landlord shall have the right to recover damages for Tenant's Default as provided herein or by Law, including the following damages provided by California Civil Code Section 1951.2;

(1) the worth at the time of award of the unpaid Rent which had been earned at the time of termination;

(2) the worth at the time of award of the amount by which the unpaid Rent which would have been earned after termination until the time of award exceeds the amount of such Rent loss that Tenant proves could reasonably have been avoided;

(3) the worth at the time of award of the amount by which the unpaid Rent for the balance of the term of this Lease after the time of award exceeds the amount of such Rent loss that Tenant proves could be reasonably avoided; and

(4) any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course of things would be likely to result therefrom, including, without limitation, Landlord's unamortized costs of tenant improvements, leasing commissions and legal fees incurred in connection with entering into this Lease. The word 'rent' as used in this Section 11.2 shall have the same meaning as the defined term Rent in this Lease. The "worth at the time of award" of the amount referred to in clauses (1) and (2) above is computed by allowing interest at the Default Rate. The worth at the time of award of the amount referred to in clause (3) above is computed by discounting such amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus one percent (1%). For the purpose of determining unpaid Rent under clause (3) above, the monthly Rent reserved in this Lease shall be deemed to be the sum of the Monthly Base Rent, monthly storage space rent, if any, and the amounts last payable by Tenant as Rent Adjustments for the calendar year in which Landlord terminated this Lease as provided hereinabove.

(c) Even if Tenant is in Default and/or has abandoned the Premises, this Lease shall continue in effect for so long as Landlord does not terminate Tenant's right to possession by written notice as provided in Section 11.2(b) above, and Landlord may enforce all its rights and remedies under this Lease, including the right to recover Rent as it becomes due under this Lease. In such event, Landlord shall have all of the rights and remedies of a landlord under California Civil Code Section 1951.4 (lessor may continue Lease in effect after Tenant's Default and abandonment and recover Rent as it becomes due, if Tenant has the right to sublet or assign, subject only to reasonable limitations), or any successor statute. During such time as Tenant is in Default, if Landlord has not terminated this Lease by written notice and if Tenant requests Landlord's consent to an assignment of this Lease or a sublease of the Premises, subject to Landlord's option to recapture pursuant to Section 10.2, Landlord shall not unreasonably withhold its consent to such assignment or sublease. Tenant acknowledges and agrees that the provisions of Article 10 shall be deemed to constitute reasonable limitations of Tenant's right to assign or sublet. Tenant acknowledges and agrees that in the absence of written notice pursuant to Section 11.2(b) above terminating Tenant's right to possession, no other act of Landlord shall constitute a termination of Tenant's right to possession or an acceptance of Tenant's surrender of the Premises, including acts of maintenance or preservation or efforts to relet the Premises or the appointment of a receiver upon initiative of Landlord to protect Landlord's interest under this Lease or the withholding of consent to a subletting or assignment, or terminating a subletting or assignment, if in accordance with other provisions of this Lease.

(d) In the event that Landlord seeks an injunction with respect to a breach or threatened breach by Tenant of any of the covenants, conditions or provisions of this Lease, Tenant agrees to pay the premium for any bond required in connection with such injunction.

(e) Tenant hereby waives any and all rights to relief from forfeiture, redemption or reinstatement granted by Law (including California Civil Code of Procedure Sections 1174 and 1179) in the event of Tenant being evicted or dispossessed for any cause or in the event of Landlord obtaining possession of the Premises by reason of Tenant's Default or otherwise;

(f) Notwithstanding any other provision of this Lease, a notice to Tenant given under this Article and Article Twenty-four of this Lease or given pursuant to California Code of Civil Procedure Section 1161, and any notice served by mail shall be deemed served, and the requisite waiting period deemed to begin under said Code of Civil Procedure Section upon mailing, without any additional waiting requirement under Code of Civil Procedure Section 1011 et seq. or by other Law. For purposes of Code of Civil Procedure Section 1162, Tenant's "place of residence", "usual place of business", "the property" and "the place where the property is situated" shall mean and be the Premises, whether or not Tenant has vacated same at the time of service.

(g) The voluntary or other surrender or termination of this Lease, or a mutual termination or cancellation thereof, shall not work a merger and shall terminate all or any existing assignments, subleases, subtenancies or occupancies permitted by Tenant, except if and as otherwise specified in writing by Landlord.

(h) No delay or omission in the exercise of any right or remedy of Landlord upon any default by Tenant, and no exercise by Landlord of its rights pursuant to Section 25.15 to perform any duty which Tenant fails timely to perform, shall impair any right or remedy or be construed as a waiver. No provision of this Lease shall be deemed waived by Landlord unless such waiver is in writing signed by Landlord. The waiver by Landlord of any breach of any provision of this Lease shall not be deemed a waiver of any subsequent breach of the same or any other provision of this Lease.

11.3 ATTORNEYS' FEES

In the event any party brings any suit or other proceeding with respect to the subject matter or enforcement of this Lease, the prevailing party (as determined by the court, agency or other authority before which such suit or proceeding is commenced) shall, in addition to such other relief as may be awarded, be entitled to recover attorneys' fees, expenses and costs of investigation as actually incurred, including court costs, expert witness fees, costs and expenses of investigation, and all attorneys' fees, costs and expenses in any such suit or proceeding (including in any action or participation in or in connection with any case or proceeding under the Bankruptcy Code, 11 United States Code Sections 101 et seq., or any successor statutes, in establishing or enforcing the right to indemnification, in appellate proceedings, or in connection with the enforcement or collection of any judgment obtained in any such suit or proceeding).

11.4 BANKRUPTCY

The following provisions shall apply in the event of the bankruptcy or insolvency of Tenant:

(a) In connection with any proceeding under Chapter 7 of the Bankruptcy Code where the trustee of Tenant elects to assume this Lease for the purposes of assigning it, such election or assignment, may only be made upon compliance with the provisions of (b) and (c) below, which conditions Landlord and Tenant acknowledge to be commercially reasonable. In the event the trustee elects to reject this Lease then Landlord shall immediately be entitled to possession of the Premises without further obligation to Tenant or the trustee.

(b) Any election to assume this Lease under Chapter 11 or 13 of the Bankruptcy Code by Tenant as debtor-in-possession or by Tenant's trustee (the "Electing Party") must provide for:

The Electing Party to cure or provide to Landlord adequate assurance that it will cure all monetary defaults under this Lease within fifteen (15) days from the date of assumption and it will cure all nonmonetary defaults under this Lease within thirty (30) days from the date of assumption. Landlord and Tenant acknowledge such condition to be commercially reasonable.

(c) If the Electing Party has assumed this Lease or elects to assign Tenant's interest under this Lease to any other person, such interest may be assigned only if the intended assignee has provided adequate assurance of future performance (as herein defined), of all of the obligations imposed on Tenant under this Lease.

For the purposes hereof, "adequate assurance of future performance" means that Landlord has ascertained that each of the following conditions has been satisfied:

(1) The assignee has submitted a current financial statement, certified by its chief financial officer, which shows a net worth and working capital in amounts sufficient to assure the future performance by the assignee of Tenant's obligations under this Lease; and

(2) Landlord has obtained consents or waivers from any third parties that may be required under a lease, mortgage, financing arrangement, or other agreement by which Landlord is bound, to enable Landlord to permit such assignment.

(d) Landlord's acceptance of rent or any other payment from any trustee, receiver, assignee, person, or other entity will not be deemed to have waived, or waive, the requirement of Landlord's consent, Landlord's right to terminate this Lease for any transfer of Tenant's interest under this Lease without such consent, or Landlord's claim for any amount of Rent due from Tenant.

Landlord shall be in default hereunder in the event Landlord has not begun and pursued with reasonable diligence the cure of any failure of Landlord to meet its obligations hereunder within thirty (30) days after the receipt by Landlord of written notice from Tenant of the alleged failure to perform. In no event shall Tenant have the right to terminate or rescind this Lease as a result of Landlord's default as to any covenant or agreement contained in this Lease, Tenant hereby waives such remedies of termination and rescission and hereby agrees that Tenant's remedies for default hereunder and for breach of any promise or inducement shall be limited to a suit for damages and/or injunction. In addition, Tenant hereby covenants that, prior to the exercise of any such remedies, it will give the Mortgagee notice and a reasonable time to cure any default by Landlord.

ARTICLE 12 SURRENDER OF PREMISES

12.1 IN GENERAL

Upon the Termination Date, Tenant shall surrender and vacate the Premises immediately and deliver possession thereof to Landlord in as clean, good and tenantable condition as existed at the Commencement Date, ordinary wear and tear, and damage caused by Landlord excepted.

Tenant shall deliver to Landlord all keys to the Premises. All improvements in and to the Premises, including any Alterations (collectively, "Leasehold Improvements") shall remain upon the Premises at the end of the Term without compensation to Tenant, Landlord, however, by written notice to Tenant at least thirty (30) days prior to the Termination Date, may require Tenant, at its expense, to remove (a) any Cable installed by or for the benefit of Tenant, and (b) any Landlord Work or Alterations that, in Landlord's reasonable judgment, are of a nature that would require removal and repair costs that are materially in excess of the removal and repair costs associated with standard office improvements, but only to the extent that Landlord notified Tenant of such required removal at the time Landlord approved such Landlord Work or Alteration (collectively referred to as "Required Removables"). Required Removables shall include, without limitation, internal stairways, raised floors, personal baths and showers, vaults, rolling file systems and structural alterations and modifications. The designated Required Removables shall be removed by Tenant before the Termination Date, Tenant shall repair damage caused by the installation or removal of Required Removables. If Tenant fails to perform its obligations in a timely manner, Landlord may perform such work at Tenant's expense. Landlord shall advise Tenant in writing, at the time Tenant requests approval for any proposed Alteration, whether such Alteration or any portion of such Alteration is a Required Removable. If any of the Tenant Additions which were installed by Tenant involved the lowering of ceilings, raising of floors or the installation of specialized wall or floor coverings or lights, then, unless otherwise approved by Landlord in writing, Tenant shall also be obligated to return such surfaces to their condition prior to the commencement of this Lease, Tenant shall also be required to close any staircases or other openings between floors. In the event possession of the Premises is not delivered to Landlord when required hereunder, or if Tenant shall fail to remove those items described above, Landlord may (but shall not be obligated to), at Tenant's expense, remove any of such property and store, sell or otherwise deal with such property, and undertake, at Tenant's expense, such restoration work as Landlord deems necessary or advisable.

12.2 LANDLORD'S RIGHTS

All property which may be removed from the Premises by Landlord shall be conclusively presumed to have been abandoned by Tenant and Landlord may deal with such property as provided in Section 11.2(b), including the waiver and indemnity obligations provided in that Section. Tenant shall also reimburse Landlord for all costs and expenses incurred by Landlord in removing any of Tenant Additions and in restoring the Premises to the condition required by this Lease at the Termination Date.

ARTICLE 13 HOLDING OVER

In the event that Tenant holds over in possession of the Premises after the Termination Date, Tenant shall pay Landlord one hundred fifty percent (150%) of the monthly Rent payable for the month immediately preceding the holding over (including increases for Rent Adjustments which Landlord may reasonably estimate. Tenant shall also pay all damages sustained by Landlord by reason of such retention of possession, The provisions of this Article 13 shall not constitute a waiver by Landlord of any re-entry rights of Landlord and Tenant's continued occupancy of the Premises shall be as a tenancy in sufferance.

ARTICLE 14
DAMAGE BY FIRE OR OTHER CASUALTY

14.1 SUBSTANTIAL UNTENANTABILITY

(a) If any fire or other casualty (whether insured or uninsured) renders all or a substantial portion of the Premises or the Building untenable, Landlord shall, with reasonable promptness after the occurrence of such damage, estimate the length of time that will be required to substantially complete the repair and restoration and shall by notice advise Tenant of such estimate ("Landlord's Notice"). If Landlord estimates that the amount of time required to substantially complete such repair and restoration will exceed one hundred eighty (180) days from the date such damage occurred, then Landlord, or Tenant if all or a substantial portion of the Premises is rendered untenable, shall have the right to terminate this Lease as of the date of such damage upon giving written notice to the other at any time within thirty (30) days after delivery of Landlord's Notice, provided that if Landlord so chooses, Landlord's Notice may also constitute such notice of termination.

(b) Unless this lease is terminated as provided in the preceding subparagraph, Landlord shall proceed with reasonable promptness to repair and restore the Premises to its condition as existed prior to such casualty, subject to reasonable delays for insurance adjustments and Force Majeure delays, and also subject to zoning Laws and building codes then in effect Landlord shall have no liability to Tenant, and Tenant shall not be entitled to terminate this Lease if such repairs and restoration are not in fact completed within the time period estimated by Landlord so long as Landlord shall proceed with reasonable diligence to complete such repairs and restoration,

(c) Tenant acknowledges that Landlord shall be entitled to the full proceeds of any insurance coverage, whether carried by Landlord or Tenant, for damages to the Premises, except for (i) those proceeds of Tenant's insurance of its own personal property and equipment which would be removable by Tenant at the Termination Date, (ii) proceeds of any business interruption Insurance maintained by Tenant, and (iii) proceeds of any insurance carried by Tenant covering the loss of any Tenant Additions. All such insurance proceeds shall be payable to Landlord whether or not the Premises are to be repaired and restored; provided, however, if this Lease is not terminated and the parties proceed to repair and restore Tenant Additions at Tenant's cost, to the extent Landlord received proceeds of Tenant's insurance covering Tenant Additions, such proceeds shall be applied to reimburse Tenant for its cost of repairing and restoring Tenant Additions.

(d) Notwithstanding anything to the contrary herein set forth: (i) Landlord shall have no duty pursuant to this Section to repair or restore any portion of any Tenant Additions or to expend for any repair or restoration of the Premises or Building amounts in excess of insurance proceeds paid to Landlord and available for repair or restoration; and (ii) Tenant shall not have the right to terminate this Lease pursuant to this Section if any damage or destruction was caused by the act or neglect of Tenant, its agent or employees. Whether or not the Lease is terminated pursuant to this Article 14, in no event shall Tenant be entitled to any compensation or damages for loss of the use of the whole or any part of the Premises or for any inconvenience or annoyance occasioned by any such damage, destruction, rebuilding or restoration of the Premises or the Building or access thereto.

(e) Any repair or restoration of the Premises performed by Tenant shall be in accordance with the provisions of Article 9 hereof.

14.2 INSUBSTANTIAL UNTENANTABILITY

If the Premises or the Building is damaged by a casualty but neither is rendered substantially untenable and Landlord estimates that the time to substantially complete the repair or restoration will not exceed one hundred eighty (180) days from the date such damage occurred, then Landlord shall proceed to repair and restore the Building or the Premises, other than Tenant Additions, with reasonable promptness, unless such damage is to the Premises and occurs during the last six (6) months of the Term, in which event either Tenant or Landlord shall have the right to terminate this Lease as of the date of such casualty by giving written notice thereof to the other within thirty (30) days after the date of such casualty. Notwithstanding the aforesaid, Landlord's obligation to repair shall be limited in accordance with the provisions of Section 14.1 above.

14.3 RENT ABATEMENT

Except for the negligence or willful act of Tenant or its agents, employees, contractors or invitees, if all or any part of the Premises are rendered untenable by fire or other casualty and this Lease is not terminated, Monthly Base Rent and Rent Adjustments shall abate for that part of the Premises which is untenable on a per diem basis from the date of the casualty until Landlord has Substantially Completed the repair and restoration work in the Premises which it is required to perform, provided, that as a result of such casualty, Tenant does not occupy the portion of the Premises which is untenable during such period.

14.4 WAIVER OF STATUTORY REMEDIES

The provisions of this Lease, including this Article 14, constitute an express agreement between Landlord and Tenant with respect to any and all damage to, or destruction of, the Premises or the Property or any part of either, and any Law, including Sections 1932(2), 1933(4), 1941 and 1942 of the California Civil Code, with respect to any rights or obligations concerning damage or destruction shall have no application to this Lease or to any damage to or destruction of all or any part of the Premises or the Property or any part of either, and are hereby waived.

ARTICLE 15 EMINENT DOMAIN

15.1 TAKING OF WHOLE OR SUBSTANTIAL PART

In the event the whole or any substantial part of the Building or of the Premises is taken or condemned by any competent authority for any public use or purpose (including a deed given in lieu of condemnation) and is thereby rendered untenable or such taking could reasonably be expected to prevent Tenant from operating its business in substantially the manner operated by Tenant prior to such taking, this Lease shall terminate as of the date title vests in such

authority, and Monthly Base Rent and Rent Adjustments shall be apportioned as of the Termination Date. Notwithstanding anything to the contrary herein set forth, in the event the taking is temporary (for less than the remaining Term of the Lease), Landlord may elect either (i) to terminate this Lease or (ii) permit Tenant to receive the entire award attributable to the Premises in which ease Tenant shall continue to pay Rent and this Lease shall not terminate.

15.2 TAKING OF PART

In the event a part of the Building or the Premises is taken, or condemned by any competent authority (or a deed is delivered in lieu of condemnation) and this Lease is not terminated, the Lease shall be amended to reduce or increase, as the case may be, the Monthly Base Rent and Tenant's Share to reflect the Rentable Area of the Premises or Building, as the case may be, remaining after any such taking or condemnation. Landlord, upon receipt and to the extent of the award in condemnation (or proceeds of sale) shall make necessary repairs and restorations to the Premises (exclusive of Tenant Additions) and to the Building to the extent necessary to constitute the portion of the Building not so taken or condemned as a complete architectural and economically efficient unit. Notwithstanding the foregoing, if as a result of any taking, or a governmental order that the grade of any street or alley adjacent to the Building is to be changed and such taking or change of grade makes it necessary or desirable to substantially remodel or restore the Building or prevents the economical operation of the Building, Landlord shall have the right to terminate this Lease upon ninety (90) days prior written notice to Tenant.

15.3 COMPENSATION

Landlord shall be entitled to receive the entire award or sale proceeds from any such taking, condemnation or sale without any payment to Tenant, and Tenant hereby assigns to Landlord Tenant's interest, if any, in such award; provided, however, Tenant shall have the right separately to pursue against the condemning authority a separate award in respect of the loss, if any, to Tenant Additions paid for by Tenant without any credit or allowance from Landlord so long as there is no diminution of Landlord's award as a result.

ARTICLE 16 INSURANCE

16.1 TENANT'S INSURANCE

Tenant, at Tenant's expense, agrees to maintain in force, with a company or companies acceptable to Landlord, during the Term; (a) Commercial General Liability Insurance on a primary basis and without any right of contribution from any insurance carried by Landlord covering the Premises on an occurrence basis against all claims for personal injury, bodily injury, death and property damage, including contractual liability covering the indemnification provisions in this Lease, and such insurance shall be for such limits that are reasonably required by Landlord from time to time but not less than a combined single limit of Five Million and No/100 Dollars (\$5,000,000.00); (b) Workers' Compensation and Employers' Liability Insurance to the extent required by and in accordance with the Laws of the State of California; (c) "All Risks" property insurance in an amount adequate to cover the full replacement cost of all Tenant Additions, equipment, installations, fixtures and contents of the Premises in the event

of loss; (d) in the event a motor vehicle is to be used by Tenant in connection with its business operation from the Premises, Comprehensive Automobile Liability Insurance coverage with limits of not less than One Million and No/100 Dollars (\$1,000,000.00) combined single limit coverage against bodily injury liability and property damage liability arising out of the use by or on behalf of Tenant, its agents and employees in connection with this Lease, of any owned, non-owned or hired motor vehicles; and (e) such other insurance or coverages as Landlord reasonably requires.

16.2 FORM OF POLICIES

Each policy referred to in 16.1 shall satisfy the following requirements. Each policy shall (i) name Landlord and the Indemnitees as additional insureds (except Workers' Compensation and Employers' Liability Insurance), (ii) be issued by one or more responsible insurance companies licensed to do business in the State of California reasonably satisfactory to Landlord, (iii) where applicable, provide for deductible amounts satisfactory to Landlord and not permit co-insurance, (iv) shall provide that such insurance may not be canceled or amended without thirty (30) days' prior written notice to the Landlord, and (v) each policy of "All-Risks" property insurance shall provide that the policy shall not be invalidated should the insured waive in writing prior to a loss, any or all rights of recovery against any other party for losses covered by such policies. Tenant shall deliver to Landlord, certificates of insurance and at Landlord's request, copies of all policies and renewals thereof to be maintained by Tenant hereunder, not less than ten (10) days prior to the Commencement Date and not less than ten (10) days prior to the expiration date of each policy.

16.3 LANDLORD'S INSURANCE

Landlord agrees to purchase and keep in full force and effect during the Term hereof, including any extensions or renewals thereof, insurance under policies issued by insurers of recognized responsibility, qualified to do business in the State of California on the Building in amounts not less than the greater of eighty (80%) percent of the then full replacement cost (without depreciation) of the Building (above foundations and excluding Tenant Additions) or an amount sufficient to prevent Landlord from becoming a co-insurer under the terms of the applicable policies, against fire and such other risks as may be included in standard forms of all risk coverage insurance reasonably available from time to time. Landlord agrees to maintain in force during the Term, Commercial General Liability Insurance covering the Building on an occurrence basis against all claims for personal injury, bodily injury, death, and property damage. Such insurance shall be for a combined single limit of not less than Five Million and No/100 Dollars (\$5,000,000.00). Neither Landlord's obligation to carry such insurance nor the carrying of such insurance shall be deemed to be an indemnity by Landlord with respect to any claim, liability, loss, cost or expense due, in whole or in part, to Tenant's negligent acts or omissions or willful misconduct. Without obligation to do so, Landlord may, in its sole discretion from time to time, carry insurance in amounts greater and/or for coverage additional to the coverage and amounts set forth above.

16.4 WAIVER OF SUBROGATION

(a) Landlord agrees that, if obtainable at no, or minimal, additional cost, and so long as the same is permitted under the laws of the State of California, it will include in its "All Risks" policies appropriate clauses pursuant to which the insurance companies (i) waive all right of subrogation against Tenant with respect to losses payable under such policies and/or (ii) agree that such policies shall not be invalidated should the insured waive in writing prior to a loss any or all right of recovery against any party for losses covered by such policies.

(b) Tenant agrees to include, if obtainable at no, or minimal, additional cost, and so long as the same is permitted under the laws of the State of California, in its "All Risks" insurance policy or policies on Tenant Additions, whether or not removable, and on Tenant's furniture, furnishings, fixtures and other property removable by Tenant under the provisions of this Lease appropriate clauses pursuant to which the insurance company or companies (i) waive the right of subrogation against Landlord and/or any tenant of space in the Building with respect to losses payable under such policy or policies and/or (ii) agree that such policy or policies shall not be invalidated should the insured waive in writing prior to a loss any or all right of recovery against any party for losses covered by such policy or policies. If Tenant is unable to obtain in such policy or policies either of the clauses described in the preceding sentence, Tenant shall, if legally possible and without necessitating a change in insurance carriers, have Landlord named in such policy or policies as an additional insured. If Landlord shall be named as an additional insured in accordance with the foregoing, Landlord agrees to endorse promptly to the order of Tenant, without recourse, any check, draft, or order for the payment of money representing the proceeds of any such policy or representing any other payment growing out of or connected with said policies, and Landlord does hereby irrevocably waive any and all rights in and to such proceeds and payments.

(c) Provided that Landlord's right of full recovery under its policy or policies aforesaid is not adversely affected or prejudiced thereby, Landlord hereby waives any and all right of recovery which it might otherwise have against Tenant, its servants, agents and employees, for loss or damage occurring to the Real Property and the fixtures, appurtenances and equipment therein, to the extent the same is covered by Landlord's insurance, notwithstanding that such loss or damage may result from the negligence or fault of Tenant, its servants, agents or employees. Provided that Tenant's right of full recovery under its aforesaid policy or policies is not adversely affected or prejudiced thereby, Tenant hereby waives any and all right of recovery which it might otherwise have against Landlord, its servants, and employees and against every other tenant of the Real Property who shall have executed a similar waiver as set forth in this Section 16.4 (c) for loss or damage to Tenant Additions, whether or not removable, and to Tenant's furniture, furnishings, fixtures and other property removable by Tenant under the provisions hereof to the extent the same is coverable by Tenant's insurance required under this Lease, notwithstanding that such loss or damage may result from the negligence or fault of Landlord, its servants, agents or employees, or such other tenant and the servants, agents or employees thereof.

(d) Landlord and Tenant hereby agree to advise the other promptly if the clauses to be included in their respective insurance policies pursuant to subparagraphs (a) and (b) above cannot be obtained on the terms hereinbefore provided and thereafter to furnish the other with a certificate of insurance or copy of such policies showing the naming of the other as an additional insured, as aforesaid. Landlord and Tenant hereby also agree to notify the other promptly of any cancellation or change of the terms of any such policy that would affect such clauses or naming. All such policies which name both Landlord and Tenant as additional insureds shall, to the extent obtainable, contain agreements by the insurers to the effect that no act or omission of any additional insured will invalidate the policy as to the other additional insureds.

16.5 NOTICE OF CASUALTY

Tenant shall give Landlord notice in case of a fire or accident in the Premises promptly after Tenant is aware of such event,

ARTICLE 17 WAIVER OR CLAIMS AND INDEMNITY

17.1 WAIVER OF CLAIMS

To the extent permitted by Law, Tenant releases the Indemnitees from, and waives all claims for, damage to person or property sustained by the Tenant or any occupant of the Premises or the Property resulting directly or indirectly from any existing or future condition, defect, matter or thing in and about the Premises or the Property or any part of either or any equipment or appurtenance therein, or resulting from any accident in or about the Premises or the Property, or resulting directly or indirectly from any act or neglect of any tenant or occupant of the Property or of any other person, including Landlord's agents and servants, except to the extent caused by the gross negligence or willful and wrongful act of any of the Indemnitees (including any contractor of property manager) or any employee, agent or contractor of Landlord. To the extent permitted by Law, Tenant and Landlord hereby waive any consequential damages, compensation or claims for inconvenience or loss of business, rents, or profits as a result of such injury or damage. If any such damage, whether to the Premises or the Property or any part of either, or whether to Landlord or to other tenants in the Property, results from any act or neglect of Tenant, its employees, servants, agents, contractors, invitees or customers, Tenant shall be liable therefor and Landlord may, at Landlord's option, repair such damage and Tenant shall, upon demand by Landlord, as payment of additional Rent hereunder, reimburse Landlord within thirty (30) days of demand for the total cost of such repairs, in excess of amounts, if any, paid to Landlord under insurance covering such damages. Tenant shall not be liable for any such damage caused by its acts or neglect to the extent Landlord or a tenant has recovered proceeds of insurance policies and the insurance company has waived its right of subrogation against Tenant,

17.2 INDEMNITY BY TENANT

To the extent permitted by Law, Tenant hereby indemnifies, and agrees to protect, defend and hold the Indemnitees harmless, against any and all actions, claims, demands, liability, costs and expenses, including reasonable attorneys' fees and expenses for the defense thereof, arising from Tenant's occupancy of the Premises, from the undertaking of any Tenant Additions or repairs to the Premises, from the conduct of Tenant's business on the Premises, or from any breach or default on the part of Tenant in the performance of any covenant or agreement on file part of Tenant to be performed pursuant to the terms of this Lease, or from any willful act or

negligence of Tenant, its agents, contractors, servants, employees, customers or invitees, in or about the Premises or the Property or any part of either. In case of any action or proceeding brought against the Indemnites by reason of any such claim, upon notice from Landlord, Tenant covenants to defend such action or proceeding by counsel chosen by Tenant and reasonably acceptable to Landlord In Landlord's good faith judgement (THESE ARE NOT EXACTLY REFLEXIVE INTENTIONALLY, FOR IT IS TENANT WHO IS OCCUPYING SPACE OWNED BY LANDLORD AND, AS SUCH, CAN DO DIRECT DAMAGE TO LANDLORD, IF LANDLORD DOES SOMETHING, IT IS LIKELY AN ACT THAT WOULD IMPACT OTHER TENANTS AND HENCE THE STANDARD FOR ATTORNEY IS MORE IMPORTANT), Landlord reserves the right to settle, compromise or dispose of any and all actions, claims and demands related to the foregoing indemnity. The foregoing indemnity shall not operate to relieve Indemnites of liability to the extent such liability is caused by the willful and wrongful act of Indemnites. Further, the foregoing indemnity is subject to and shall not diminish any waivers in effect in accordance with Section 16.4 by Landlord or its insurers to the extent of amounts, if any, paid to Landlord under its "All-Risks" properly insurance.

17.3 INDEMNITY BY LANDLORD

To the extent permitted by Law, Landlord hereby indemnifies, and agrees to protect, defend and hold Tenant, its partners, members, directors, officers, agents and employees (the "Tenant Indemnites") harmless, against any and all actions, claims, demands, liability, costs and expenses, including reasonable attorneys' fees and expenses for the defense thereof, arising from (a) the gross negligence or willful misconduct of Landlord or any employee, agent or contractor of Landlord or of property manager arising from the Landlord Work or any repairs to the Premises, (b) from any breach or default on the part of Landlord in the performance of any covenant or agreement on the part of Landlord (LANDLORD IS THE PARTY TO THIS AGREEMENT, NOT PROPERTY MANAGER, SO ONLY LANDLORD IS CAPABLE OF BREACH. AN ACTION OF THE PROPERTY MANAGER MIGHT LEAD LANDLORD TO BREACH, BUT IT IS ONLY LANDLORD THAT CAN DO SO), to be performed pursuant to the terms of this Lease, or (c) from any willful act or the gross negligence of Landlord, in or about the Premises or the Property or any part of either, In case of any action or proceeding brought against the Tenant Indemnites by reason of any such claim, upon notice from Tenant, Landlord covenants to defend such action or proceeding by counsel reasonably chosen by Landlord. The foregoing indemnity shall not operate to relieve Tenant Indemnites of liability to the extent such liability is caused by the willful and wrongful act of the Tenant Indemnites. Further, the foregoing Indemnity is subject to and shall not diminish any waivers in effect in accordance with Section 16.4 by Tenant or its insurers to the extent of amounts, if any, paid to Tenant under its "All-Risks" property insurance.

**ARTICLE 18
RULES AND REGULATIONS**

18.1 RULES

Tenant agrees for itself and for its subtenants, employees, agents, and invitees to comply with the rules and regulations listed on Exhibit C-2 attached hereto and with all reasonable modifications and additions thereto which Landlord may make from time to time so long as such modifications and additions apply to all tenants generally and not to specific tenants,

18.2 ENFORCEMENT

Nothing in this Lease shall be construed to impose upon the Landlord any duty or obligation to enforce the rules and regulations as set forth on Exhibit C or as hereafter adopted, or the terms, covenants or conditions of any other lease as against any other tenant; and the Landlord shall not be liable to the Tenant for violation of the same by any other tenant, its servants, employees, agents, visitors or licensees. Landlord shall use reasonable efforts to enforce the rules and regulations of the Project in a uniform and non-discriminatory manner.

**ARTICLE 19
LANDLORD'S RESERVED RIGHTS**

Landlord shall have the following rights exercisable without notice to Tenant and without liability to Tenant for damage or injury to persons, property or business and without being deemed an eviction or disturbance of Tenant's use or possession of the Premises or giving rise to any claim for offset or abatement of Rent: (1) to change the Building's name or street address upon thirty (30) days' prior written notice to Tenant; (2) to install, affix and maintain all signs on the exterior and/or interior of the Building; (3) to designate and/or approve prior to installation, all types of signs, window shades, blinds, drapes, awnings or other similar items, and all internal lighting that may be visible from the exterior of the Premises; (4) upon reasonable notice to Tenant, to display the Premises to prospective purchasers and lenders at reasonable hours at any time during the Term and to prospective tenants at reasonable hours during the last twelve (12) months of the Term; (5) to grant to any party the exclusive right to conduct any business or render any service in or to the Building, provided such exclusive right shall not operate to prohibit Tenant from using the Premises for the purpose permitted hereunder; (6) to change the arrangement and/or location of entrances or passageways, doors and doorways, corridors, elevators, stairs, washrooms or public portions of the Building, and to close entrances, doors, corridors, elevators or other facilities, provided that such action shall not materially and adversely interfere with Tenant's access to the Premises or the Building; (7) to have access for Landlord and other tenants of the Building to any mail chutes and boxes located in or on the Premises as required by any applicable rules of the United States Post Office; and (8) to close the Building after Standard Operating Hours, except that Tenant and its employees and invitees shall be entitled to admission at all times, under such regulations as Landlord prescribes for security purposes.

**ARTICLE 20
ESTOPPEL CERTIFICATE**

20.1 IN GENERAL

Within ten (10) days after request therefor by Landlord, Mortgagee or any prospective mortgagee or owner, Tenant agrees as directed in such request to execute an Estoppel Certificate in recordable form, binding upon Tenant, certifying (i) that this Lease is unmodified and in full force and effect (or if there have been modifications, a description of such modifications and that this Lease as modified is in full force and effect); (ii) the dates to which Rent has been paid; (iii) that Tenant is in the possession of the Premises if that is the case; (iv) that Landlord is not in default under this Lease, or, if Tenant believes Landlord is in default, the nature thereof in detail; (v) that Tenant has no offsets or defenses to the performance of its obligations under this Lease (or if Tenant believes there are any offsets or defenses, a full and complete explanation thereof); and (vi) to any other information reasonably and customarily requested.

20.2 ENFORCEMENT

In the event Tenant fails to deliver an Estoppel Certificate, then such failure shall be a Default for which there shall be no cure or grace period. In addition to any other remedy available to Landlord, Landlord may impose a charge equal to \$500.00 for each day that Tenant fails to deliver an Estoppel Certificate and Tenant shall be deemed, to have irrevocably appointed Landlord as Tenant's attorney-in-fact to execute and deliver such Estoppel Certificate.

**ARTICLE 21
RELOCATION**

At any time after the date of this Lease, Landlord may substitute for the Premises, other premises in the Project, or in any other project of like or better quality in Emeryville owned or controlled now or in the future by Landlord or one of Landlord's affiliates (the "New Premises"), in which event the New Premises shall be deemed to be the Premises for all purposes under this Lease; provided that (i) the New Premises shall be substantially similar to the Premises in area and interior layout of the premises; (ii) if Tenant is then occupying the Premises, Landlord shall pay the actual and reasonable expenses of physically moving Tenant and its property and equipment including telephone and IT cabling, replacing letterhead stationery, etc. to the New Premises; (iii) Landlord shall give Tenant not less than one hundred fifty (150) days' prior written notice of such substitution; (iv) Landlord, at its expense, shall improve the New Premises with improvements substantially similar to those in the Premises at the time of such substitution, if the Premises are then improved and such improvements shall be completed before Tenant is required to vacate the Premises and accept such New Premises; and (v) Tenant shall receive nine (9) months of Rent abatement beginning upon the commencement of Tenant's occupancy of the New Premises. Notwithstanding anything contained herein to the contrary, if such substitution is requested at a time when there are nine (9) months or fewer remaining in the Term, Tenant shall have a right to terminate this Lease or accept the substitution and receive an abatement of Rent for the remainder of the Term,

**ARTICLE 22
REAL ESTATE BROKERS**

Tenant represents that, except for the brokers) listed in Section 1.1, Tenant has not dealt with any real estate broker, sales person, or finder in connection with this Lease, and no such person initiated or participated in the negotiation of this Lease, or showed the Premises to Tenant. Tenant hereby agrees to indemnify, protect, defend and hold Landlord and the Indemnitees, harmless from and against any and all liabilities and claims for commissions and fees arising out of a breach of the foregoing representation. Landlord agrees to pay any commission to which the brokers listed in Section 1.1 are entitled in connection with this Lease pursuant to Landlord's written agreement with such broker.

**ARTICLE 23
MORTGAGEE PROTECTION**

23.1 SUBORDINATION AND ATTORNMENT

This Lease is and shall be expressly subject and subordinate at all times to (i) any ground or underlying lease of the Real Property, now or hereafter existing, and all amendments, extensions, renewals and modifications to any such lease, and (ii) the lien of any mortgage or trust deed now or hereafter encumbering fee title to the Real Property and/or the leasehold estate under any such lease, and all amendments, extensions, renewals, replacements and modifications of such mortgage or trust deed and/or the obligation seemed thereby, unless such ground lease or ground lessor, or mortgage, trust deed or Mortgagee, expressly provides or elects that the Lease shall be superior to such lease or mortgage or trust deed. If any such mortgage or trust deed is foreclosed (including any sale of the Real Property pursuant to a power of sale), or if any such lease is terminated, upon request of the Mortgagee or ground lessor, as the case may be, Tenant shall, so long as such Mortgagee or ground lessor agrees not to disturb Tenant's rights under this Lease, attorn to the purchaser at the foreclosure sale or to the ground lessor under such lease, as the case may be, provided, however, that such purchaser or ground lessor shall not be (i) bound by any payment of Rent for more than one month in advance except payments in the nature of security for the performance by Tenant of its obligations under this Lease; (ii) subject to any offset, defense or damages arising out of a default of any obligations of any preceding Landlord; or (iii) bound by any amendment or modification of this Lease made without the written consent of the Mortgagee or ground lessor. So long as Tenant receives a written agreement from such purchaser or ground lessor agree not to disturb Tenant's occupancy of the Premises during the remaining Term, this subordination, shall be self-operative and no further certificate or instrument of subordination need be required by any such Mortgagee or ground lessor. In confirmation of such subordination, however, Tenant shall execute promptly any reasonable certificate or instrument that Landlord, Mortgagee or ground lessor may request. Tenant hereby constitutes Landlord as Tenant's attorney-in-fact to execute such certificate or instrument far and on behalf of Tenant upon Tenant's failure to do so within fifteen (15) days of a request to do so. Upon request by such successor in interest, Tenant shall execute and deliver reasonable instruments confirming the attornment provided for herein.

23.2 MORTGAGEE PROTECTION

Tenant agrees to give any Mortgagee or ground lessor, by registered or certified mail, a copy of any notice of default served upon the Landlord by Tenant, provided that prior to such notice Tenant has received written notice (by way of service on Tenant of a copy of an assignment of rents and leases, or otherwise) of the address of such Mortgagee or ground lessor. Tenant further agrees that if Landlord shall have failed to cure such default within the time provided for in this Lease, then the Mortgagee or ground lessor shall have an additional fifteen (15) days after receipt of notice thereof within which to cure such default or if such default cannot be cured within that time, then such additional notice time as may be necessary not to exceed an additional ten (10) days, if, within such fifteen (15) days, any Mortgagee or ground lessor has commenced and is diligently pursuing the remedies necessary to cure such default (including commencement of foreclosure proceedings or other proceedings to acquire possession of the Real Property, if necessary to effect such cure). Until the time allowed as aforesaid for Mortgagee or ground lessor to cure such defaults has expired without cure, Tenant shall have no right to, and shall not, terminate this Lease on account of default. This Lease may not be modified or amended so as to reduce the Rent or shorten the Term, or so as to adversely affect in any other respect to any material extent the rights of the Landlord, nor shall this Lease be canceled or surrendered, without the prior written consent, in each instance, of the ground lessor or the Mortgagee.

ARTICLE 24 NOTICES

(a) All notices, demands or requests provided for or permitted to be given pursuant to this Lease must be in writing and shall be personally delivered, sent by Federal Express or other reputable overnight courier service, or mailed by first class, registered or certified United States mail, return receipt requested, postage prepaid.

(b) All notices, demands or requests to be sent pursuant to this Lease shall be deemed to have been properly given or served by delivering or sending the same in accordance with this Section, addressed to the parties hereto at their respective addresses listed in Sections 1.1.

(c) Notices, demands or requests sent by mail or overnight courier service as described above shall be effective upon deposit in the mail or with such courier service. However, the time period in which a response to any such notice, demand or request must be given shall commence to run from (i) in the case of delivery by mail, the date of receipt on the return receipt of the notice, demand or request by the addressee thereof, or (ii) in the case of delivery by Federal Express or other overnight courier service, the date of acceptance of delivery by an employee, officer, director or partner of Landlord or Tenant. Rejection or other refusal to accept or the inability to deliver because of changed address of which no notice was given, as indicated by advice from Federal Express or other overnight courier service or by mail return receipt, shall be deemed to be receipt of notice, demand or request sent. Notices may also be served by personal service upon any officer, director or partner of Landlord or Tenant, and shall be effective upon such service.

(d) By giving to the other party at least thirty (30) days written notice thereof, either party shall have the right from time to time during the term of this Lease to change their respective addresses for notices, statements, demands and requests, provided such new address shall be within the United States of America,

**ARTICLE 25
MISCELLANEOUS**

25.1 LATE CHARGES

(a) All payments required hereunder (other than the Monthly Base Rent, Rent Adjustments, and Rent Adjustment Deposits, which shall be due as hereinbefore provided) to Landlord shall be paid within ten (10) days after Landlord's demand therefor. All such amounts (including Monthly Base Rent, Rent Adjustments, and Rent Adjustment Deposits) not paid when due shall bear interest from the date due until the date paid at the Default Rate in effect on the date such payment was due.

(b) In the event Tenant is more than five (5) days late in paying any installment of Rent due under this Lease, Tenant shall pay Landlord a late charge equal to five percent (5%) of the delinquent installment of Rent. The parties agree that (i) such delinquency will cause Landlord to incur costs and expenses not contemplated herein, the exact amount of which will be difficult to calculate, including the cost and expense that will be incurred by Landlord in processing each delinquent payment of rent by Tenant, (b) the amount of such late charge represents a reasonable estimate of such costs and expenses and that such late charge shall be paid to Landlord for each delinquent payment in addition to all Rent otherwise due hereunder. The parties further agree that the payment of late charges and the payment of interest provided for in subparagraph (a) above are distinct and separate from one another in that the payment of interest is to compensate Landlord for its inability to use the money improperly withheld by Tenant, while the payment of late charges is to compensate Landlord for its additional administrative expenses in handling and processing delinquent payments.

(c) Payment of interest at the Default Rate and/or of late charges shall not excuse or cure any default by Tenant under this Lease, nor shall the foregoing provisions of this Article or any such payments prevent Landlord from exercising any right or remedy available to Landlord upon Tenant's failure to pay Rent when due, including the right to terminate this Lease,

25.2 NO JURY TRIAL; VENUE; JURISDICTION

To the fullest extent permitted by law, including laws enacted after the Commencement Date, each party hereto (which includes any assignee, successor, heir or personal representative of a party) shall not seek a jury trial, hereby waives trial by jury, and hereby further waives any objection to venue in the County in which, the Project is located, and agrees and consents to personal jurisdiction of the courts of the State of California, in any action or proceeding or counterclaim brought by any party hereto against the other on any matter whatsoever arising out of or in any way connected with this Lease, the relationship of Landlord and Tenant, Tenant's use or occupancy of the Premises, or any claim of injury or damage, or the enforcement of any remedy under any statute, emergency or otherwise, whether any of the foregoing is based on this

Lease or on tort law. No party will seek to consolidate any such action in which a jury has been waived with any other action in which a jury trial cannot or has not been waived. It is the intention of the parties that these provisions shall be subject to no exceptions. The provisions of this Section shall survive the expiration or earlier termination of this Lease.

25.3 DISCRIMINATION

Tenant agrees for Tenant and Tenant's heirs, executors, administrators, successors and assigns and all persons claiming under or through Tenant, and this Lease is made and accepted upon and subject to the following conditions: that there shall be no discrimination against or segregation of any person or group of persons on account of race, color, creed, religion, sex, marital status, national origin or ancestry (whether in the leasing, subleasing, transferring, use, occupancy, tenure or enjoyment of the Premises or otherwise) nor shall Tenant or any person claiming under or through Tenant establish or permit any such practice or practices of discrimination or segregation with reference to the use or occupancy of the Premises by Tenant or any person claiming through or under Tenant.

25.4 OPTION

This Lease shall not become effective as a lease or otherwise until executed and delivered by both Landlord and Tenant.

25.5 TENANT AUTHORITY

Tenant represents and warrants to Landlord that it has full authority and power to enter into and perform its obligations under this Lease, that the person executing this Lease is fully empowered to do so, and that no consent or authorization is necessary from any third party.

25.6 LANDLORD AUTHORITY

Landlord represents and warrants to Tenant that it has full authority and power to enter into and perform its obligations under this Lease, that the person executing this Lease is fully empowered to do so, and that no consent or authorization is necessary from any third party.

25.7 ENTIRE AGREEMENT

This Lease, the Exhibits attached hereto and the Workletter contain the entire agreement between Landlord and Tenant concerning the Premises and there are no other agreements, either oral or written, and no other representations or statements, either oral or written, on which Tenant has relied. This Lease shall not be modified except by a writing executed by Landlord and Tenant.

25.8 MODIFICATION OF LEASE TOR BENEFIT OP MORTGAGEE

If any Mortgagee of Landlord reasonably requires a modification of this Lease, then Tenant agrees that the Lease may be so modified so long as such modification does not: (a) result in any increased cost or expense to Tenant, (b) change the size, location, use or character of the Premises, (c) impose any additional obligations on Tenant, or (d) decrease the rights of Tenant under this Lease.

25.9 EXCULPATION

Tenant agrees, on its behalf and on behalf of its successors and assigns, that any liability or obligation under this Lease shall only be enforced against Landlord's equity interest in the Property up to a maximum of Ten Million Dollars (\$10,000,000.00) and in no event against any other assets of the Landlord, or Landlord's officers or directors or partners, and that any liability of Landlord with respect to this Lease shall be so limited and Tenant shall not be entitled to any judgment in excess of such amount.

25.10 ACCORD AND SATISFACTION

No payment by Tenant or receipt by Landlord of a lesser amount than any installment or payment of Rent due shall be deemed to be other than on account of the amount due, and no endorsement or statement on any check or any letter accompanying any check or payment of Rent shall be deemed an accord and satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such installment or payment of Rent or pursue any other remedies available to Landlord. No receipt of money by Landlord from Tenant after the termination of this Lease or Tenant's right of possession of the Premises shall reinstate, continue or extend the Term. Receipt or acceptance of payment from anyone other than Tenant, including an assignee of Tenant, is not a waiver of any breach of Article Ten, and Landlord may accept such payment on account of the amount due without prejudice to Landlord's right to pursue any remedies available to Landlord.

25.11 LANDLORD'S OBLIGATIONS ON SALE OF BUILDING

In the event of a sale or other transfer of the Building, subject to the purchaser's assumption of Landlord's obligations (including Landlord's obligations with respect to the Security Deposit), Landlord shall be entirely freed and relieved of all agreements and obligations of Landlord hereunder accruing or to be performed after the date of such sale or transfer, and any remaining liability of Landlord with respect to this Lease shall be limited to the dollar amount specified in Section 25.9 and Tenant shall not be entitled to any judgment in excess of such amount. Landlord shall have the right to assign this Lease to an entity comprised of the principals of Landlord or affiliates of such entities. Upon such assignment and assumption of the obligations of Landlord hereunder, Landlord shall be entirely freed and relieved of all obligations hereunder, but only so long as (a) such successor entity owns all of Landlord's right, title and interest in and to the Property and the Building, and (b) such successor entity assumes all of Landlord's obligations under this Lease whenever arising.

25.12 BINDING EFFECT

Subject to the provisions of Article 10, this Lease shall be binding upon and inure to the benefit of Landlord and Tenant and their respective heirs, legal representatives, successors and permitted assigns,

25.13 CAPTIONS

The Article and Section captions in this Lease are inserted only as a matter of convenience and in no way define, limit, construe, or describe the scope or intent of such Articles and Sections.

25.14 TIME; APPLICABLE LAW; CONSTRUCTION

Time is of the essence of this Lease and each and all of its provisions. This Lease shall be construed in accordance with the Laws of the State of California. If more than one person signs this Lease as Tenant, the obligations hereunder imposed shall be joint and several. If any term, covenant or condition of this Lease or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, the remainder of this Lease, or the application of such term, covenant or condition to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby and each item, covenant or condition of this Lease shall be valid and be enforced to the fullest extent permitted by Law. Wherever the term "including" or "includes" is used in this Lease, it shall have the same meaning as if followed by the phrase "but not limited to". The language in all parts of this Lease shall be construed according to its normal and usual meaning and not strictly for or against either Landlord or Tenant.

25.15 ABANDONMENT

In the event Tenant vacates or abandons the Premises but is otherwise in compliance with all the terms, covenants and conditions of this Lease, Landlord shall (i) have the right to enter into the Premises in order to show the space to prospective tenants, (ii) have the right to reduce the services provided to Tenant pursuant to the terms of this Lease to such levels as Landlord reasonably determines to be adequate services for an unoccupied premises, and (iii) during the last six (6) months of the Term, have the right to prepare the Premises for occupancy by another tenant upon the end of the Term. Tenant expressly acknowledges that in the absence of written notice pursuant to Section 11.2(b) or pursuant to California Civil Code Section 1951.3 terminating Tenant's right to possession, none of the foregoing acts of Landlord or any other act of Landlord shall constitute a termination of Tenant's right to possession or an acceptance of Tenant's surrender of the Premises, and the Lease shall continue in effect.

25.16 LANDLORD'S RIGHT TO PERFORM TENANT'S DUTIES

If Tenant fails timely to perform any of its duties under this Lease or the Workletter, Landlord shall have the right (but not the obligation), to perform such duty on behalf and at the expense of Tenant without prior notice to Tenant, and all sums expended or expenses incurred by Landlord in performing such duty shall be deemed to be additional Rent under this Lease and shall be due and payable upon demand by Landlord.

25.17 SECURITY SYSTEM

Landlord shall not be obligated to provide or maintain any security patrol or security system. Landlord shall not be responsible for the quality of any such patrol or system which may be provided hereunder or for damage or injury to Tenant, its employees, invitees or others due to the failure, action or inaction of such patrol or system.

25.18 NO LIGHT, AIR OR VIEW EASEMENTS

Any diminution or shutting off of light, air or view by any structure which may be erected on lands of or adjacent to the Project shall in no way affect this Lease or impose any liability on Landlord.

25.19 ACCESSIBILITY STANDARDS

Pursuant to California Civil Code Section 1938, Landlord hereby notifies Tenant that as of the Effective Date the Premises has not undergone inspection by a "Certified Access Specialist" to determine whether the Premises meets all applicable construction-related accessibility standards under California Civil Code Section 55.53, but Landlord is not aware of any noncompliance as of the date of this Lease,

25.20 RECORDATION

Neither this Lease, nor any notice nor memorandum regarding the terms hereof, shall be recorded by Tenant. Any such unauthorized recording shall be a Default for which there shall be no cure or grace period. Tenant agrees to execute and acknowledge, at the request of Landlord, a memorandum of this Lease, in recordable form.

25.21 SURVIVAL

The waivers of the right of jury trial, the other waivers of claims or rights, the releases and the indemnification obligations of Landlord and Tenant under this Lease shall survive the expiration or termination of this Lease, and so shall all other obligations or agreements which by their terms survive expiration or termination of the Lease.

25.22 RIDERS

All Riders attached hereto and executed both by Landlord and Tenant shall be deemed to be a part hereof and hereby incorporated herein.

[Signatures on Following Page]

IN WITNESS WHEREOF, this Lease has been executed as of the date set forth in Section 1.1 hereof.

TENANT:

Gritstone Inc.,
a Delaware corporation

By: /s/ Andrew Allen

Print Name: Andrew Allen

Its: CEO & President

LANDLORD:

Emery Station Joint Venture, LLC,
a California limited liability company

By: Emery Station Associates, LLC,
a California limited liability company
its Managing Member

By: Wareham – NZL, LLC,
a California limited liability company
its Managing Member

By: /s/ Richard K. Robbins
Richard K. Robbins, Manager

Date: 11th November 2015

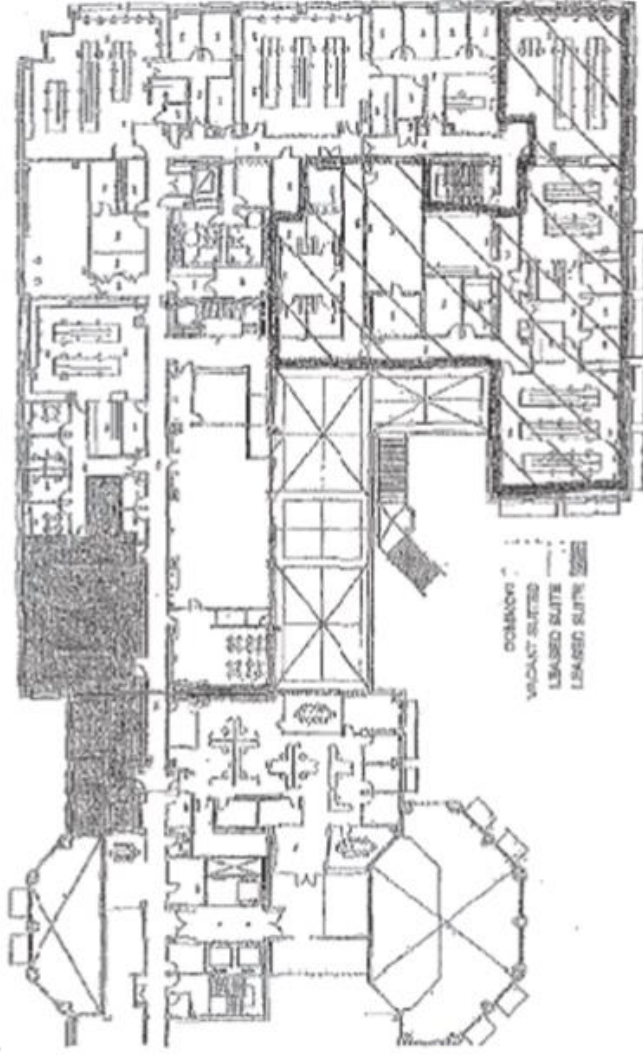
Date:11/23/15

EXHIBIT A

PLAN OF PREMISES

A-1

WARREN
BENTON
2850 HORTON STREET
HERVILL, CA



DATE: 11/20/14
11.20.14

FLOOR 2

EXHIBIT B

WORKLETTER AGREEMENT
(TURN-KEY)

1. Defined Terms. Capitalized Terms used in this Workletter shall have the same meanings set forth in the Lease except as otherwise specified herein and except for Terms capitalized in the ordinary course of punctuation. For purposes of this Workletter, the following capitalized terms have the following meanings:

1.1. "Landlord Work" means the construction and installation of the Tenant Improvements.

1.2. "Design Documents" means the layout plans and specifications for the Tenant Improvements to be constructed in the Premises which are the final product of the preliminary space planning and which (i) will be based upon and consistent with, among other things, the preliminary space plan and specifications, attached as Exhibit B-1 (the "Conceptual Plans"); and (ii) comply with all Laws as applicable and as interpreted at the time of construction of the Tenant Improvements.

1.3. "Construction Drawings" means the final architectural plans and specifications, and engineering plans and specifications, for the Tenant Improvements to be constructed in the Premises, and shall be based upon and consistent with the Design Documents.

1.4. "Tenant Improvements" means all of the initial improvements to be constructed as shown on the Construction Drawings, as they may be modified as provided herein.

2. Design Matters.

2.1. Landlord and Tenant have approved a design team consisting of DG Architects, as architect ("Architect") and Randall Lamb Associates as Mechanical/Electrical/Plumbing designer ("MEP Designer"). The Architect and MEP Designer shall be retained by Landlord and referred to collectively herein as the "Design Group." Landlord shall use commercially reasonable efforts to cause the Design Group to complete the Construction Drawings in accordance with all applicable Laws.

2.2. Landlord shall cause, and Tenant shall fully cooperate with, the Design Group to complete Design Documents and Construction Drawings in as an efficient and timely manner as possible. Any failure by Tenant to supply information and/or to provide authorizations or approvals within three (3) business days of Landlord's written request (including requests by electronic mail) shall constitute a Tenant Delay. Landlord and Tenant agree that the Tenant Improvements will generally adhere to Landlord's Building Standards and will not include materials or equipment that require unusually long fabrication or delivery times ("Long Lead Time Items"). The Design Drawings submitted by the Design Group to Landlord shall be submitted to Tenant for its prompt review and approval, which approval shall not be unreasonably withheld or delayed if the Design Drawings are in material conformance with the Conceptual Plans. The Construction Drawings submitted by the Design Group to Landlord shall be submitted to Tenant for its prompt review and approval, which approval shall not be unreasonably withheld or delayed

if the Design Drawings are in material conformance with the Conceptual Plans. The Construction Drawings submitted by the Design Group to Landlord shall be submitted to Tenant for its prompt review and approval, which approval shall not be unreasonably withheld or delayed if the Construction Drawings are in material conformance with the Design Drawings. The Construction Drawings so approved by Tenant shall be referred to herein as the "Approved Construction Drawings."

2.3. Tenant shall be responsible for the suitability of the design and function of all Tenant Improvements for the Tenant's needs and business purposes.

3. Construction; Tenant Improvement Costs.

3.1. Tenant Improvement Costs. The cost of the Tenant Improvements ("Tenant Improvement Costs") shall be paid by Landlord. The Tenant Improvement Costs shall include, without limitation, (a) the costs of the Design Group and any other consultants retained by Landlord in connection with the preparation of Design Documents and Construction Drawings, and engineering costs associated with completion of the State of California energy utilization calculations under Title 24 legislation; (b) all costs of obtaining from the City of Emeryville and any other governmental authority, approvals, building permits and occupancy permits with respect to the Tenant Improvements; (c) all costs of interior design and finish schedule plans and specifications including as-built drawings with respect to the Tenant Improvements; (d) all costs of procuring, installing and constructing the Tenant Improvements, including: (i) the cost of all on-site supervisory and administrative staff, office, equipment and temporary services rendered or provided by Contractor in connection with, and reasonably allocable to, construction of the Tenant Improvements; and (ii) the cost of any services or utilities made available by Landlord; and (e) Landlord's construction management fee.

In no event shall the Tenant Improvement Costs include (i) any costs of procuring or installing in the Premises any trade fixtures, equipment, furniture, furnishings, telephone equipment, or other personal property ("Personal Property") to be used in the Premises by Tenant, and the cost of such Personal Property shall be paid by Tenant, or (ii) any costs or expenses of any consultants retained by Tenant with respect to design, procurement, installation or construction of improvements or installations, whether real or personal property, for the Premises.

3.2. Limitations of Landlord's Obligations. Upon Substantial Completion of the Tenant Improvements, Landlord shall have no further obligation to construct improvements or construct modifications to or changes in the Tenant Improvements, except to complete the punchlist of Landlord Work remaining to be completed or correct any part thereof that is defective or is otherwise not in compliance with the Approved Construction Drawings and any approved modifications thereof, as provided in the Lease. The punchlist of remaining Landlord Work shall be prepared by Tenant no later than ten (10) business days after Substantial Completion of the Tenant Improvements. Landlord shall make commercially-reasonable efforts to have its general contractor complete all punchlist items within thirty (30) days thereafter, or such longer period as may reasonably be necessary to correct such punchlist item, provided that Landlord's general contractor commences such correction during such thirty (30) day period and thereafter diligently prosecutes such correction to completion.

4. Changes. If Tenant shall request any change, addition or alteration in the Approved Construction Drawings, Landlord shall, within no more than five (5) business days, give Tenant a written estimate of (a) the cost of engineering and design services and the construction contractor services to prepare a change order (the "Change Order") in accordance with such request, (b) the cost of work to be performed pursuant to such Change Order, and (c) the time delay expected because of such requested Change Order. Within three (3) business days following Tenant's receipt of the foregoing written estimate, Tenant shall notify Landlord in writing whether it approves such written estimate. If Tenant approves such written estimate, Tenant shall accompany such approval with a good check made payable to the order of Landlord in the amount of the estimated cost of preparing the Change Order and performing the work specified therein, and the foregoing shall constitute Landlord's authorization to proceed. If such written authorization and check are not received by Landlord within such three (3) business day period, Landlord shall not be obligated to prepare the Change Order or perform any work in connection therewith. Upon completion of the work of the Change Order and submission of the final cost thereof by Landlord to Tenant, Tenant shall promptly pay to Landlord the amount, if any, of the actual cost of the Change Order in excess of the estimated costs thereof previously paid by Tenant. Any delay in Substantial Completion of the Tenant Improvements resulting from such request for a Change Order or from the changes so made or necessitated shall be chargeable as Tenant Delay.

6. Tenant Delay. If the Substantial Completion of the Tenant Improvements in the Premises is delayed beyond the Projected Commencement Date due to Tenant Delay (defined in the Lease or otherwise expressly identified as such herein), the provisions of the Lease shall apply.

In the event of any dispute between Landlord and Tenant regarding (i) the occurrence or alleged occurrence, or the duration, of any Tenant Delay, or (ii) Substantial Completion of the Tenant Improvements, the parties agree to attempt to resolve such dispute promptly and in good faith; provided, however, that if the parties are unable to resolve such dispute within twenty (20) days after such dispute arises, the parties shall retain an independent third party architect familiar with construction in the vicinity of the Project of tenant improvements similar in nature to the Tenant Improvements to arbitrate such dispute, which third party arbitrator shall have the authority to make a final and binding resolution of such dispute, and the parties shall share equally the fees and charges of such arbitrator.

7. Entry by Tenant. Tenant may enter the Premises during construction of the Tenant Improvements and prior to the Commencement Date in accordance with of the Lease.

8. Force and Effect. The terms and conditions of this Workletter supplement the Lease and shall be construed to be a part of the Lease and are incorporated in the Lease. Without limiting the generality of the foregoing, any default by any party hereunder (after applicable notice and cure periods) shall have the same force and effect as a Default under the Lease. Should any inconsistency arise between this Workletter and the Lease as to the specific matters that are the subject of this Workletter, the terms and conditions of this Workletter shall control.

9. Representatives of Parties.

(a) Landlord has initially designated Geoffrey Sears as its sole representative with respect to the matters set forth in this Workletter, who, until further notice to Tenant, shall have full authority and responsibility to act on behalf of Landlord as required in this Workletter. Landlord shall have the right to replace its representative at any time.

(b) Tenant has designated Sara Oakman as its sole representative with respect to the matters set forth in this Workletter, who, until further notice to Landlord, shall have full authority and responsibility to act on behalf of Tenant as required in this Workletter.

EXHIBIT B-1

CONCEPTUAL PLANS



DGA daniel jordan | architects | inc
 2000 West Broadway, Suite 2000
 Portland, Oregon 97201
 503.228.1111
 www.dgaarchitects.com

POWER - DATA, PLAN SYMBOL LEGEND

- SYMBOLS**
- ◆ DUPLEX OUTLET (1P/1P/100V)
 - ◊ DUPLEX GFI POWERLZT AFF LUCH
 - ⊖ TELEPHON DUPLEX (1P/1P/100V)
 - ⊕ TELEVISION / MONITOR

POWER - DATA, PLAN GENERAL NOTES

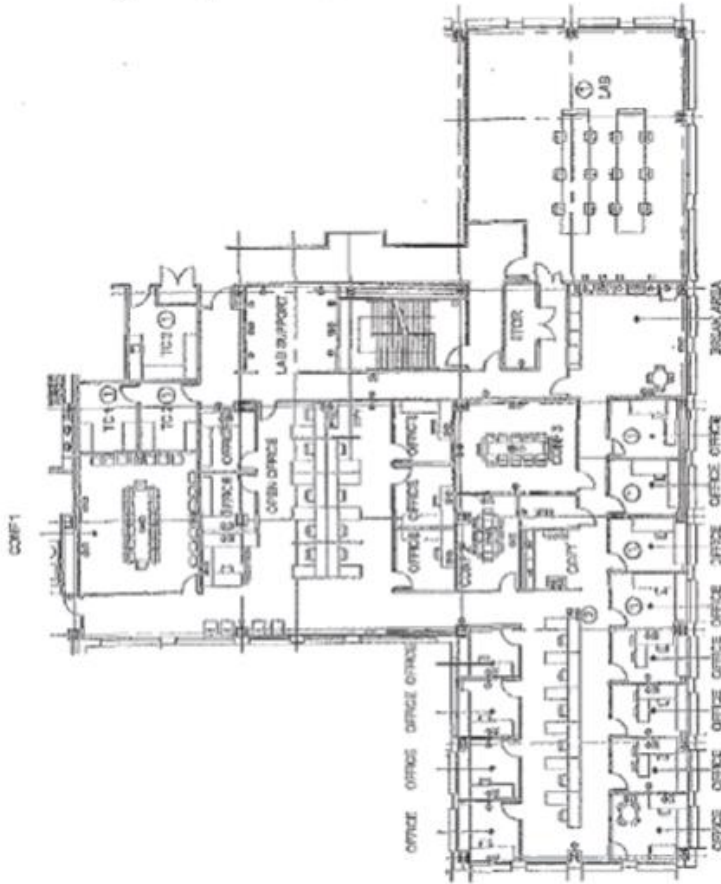
1. FURNITURE SYMBOLS FOR REFERENCED ONLY

POWER - DATA, PLAN KEYNOTES

- ① EXISTING POWER & DATA TO REMAIN
- ② POWER POLE

REQUIRE

- 2 - APPROX 1004 OFFICES
- 5 - APPROX 1000 OFFICES
- 15 - 500 DESKETS
- 1 - RECEPTION
- 1 - LARGE CONFERENCE ROOM
- 1 - MEDIUM CONFERENCE ROOM
- 1 - SMALL CONFERENCE ROOM
- 1 - BREAK AREA
- 2 - COPY
- 1 - LAB AREA FOR 14 DESKS



1 2ND LEVEL PLAN TEST FIT - STUDY.2R2
 SCALE 1/8" = 1'-0"

PROJECT
 300 HORTONDA FLOOR

PROJECT NO. NA
 DATE 11/02/15
 REFERENCE
 SCALE 1/8" = 1'-0"
 TITLE
 GRISTONE TEST FIT
 2R2

SK-001



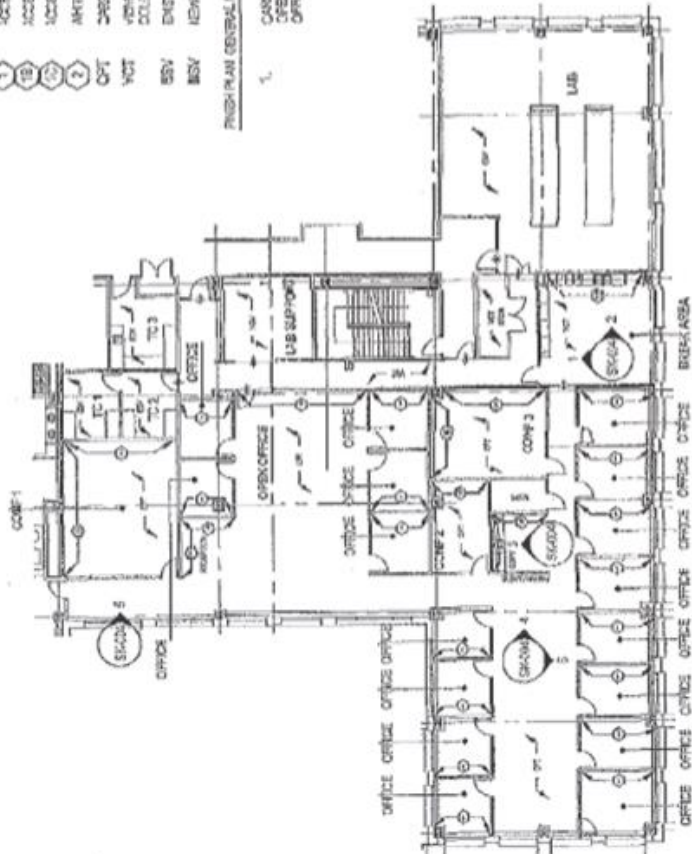
DGA | DESIGN | ARCHITECTURE | INTERIOR
 200 West 10th Street, Suite 1000
 Seattle, WA 98101
 206.461.1000
 www.dga.com

FINISH PLAN SYMBOL LEGEND

SYMBOL	DESCRIPTION
1	ACCENT PAINT COLOR (PAVILION)
10	ACCENT PAINT COLOR 10
11	ACCENT PAINT COLOR 11
2	ANTIBOARD PAINT
CPT	3/8" GYP T&G - ALLOWANCE FOR 3 PATTERNS / COLORS
VT	VENEER COMPOSITION TILE - ALLOWANCE FOR 4 COLOR PATTERNS
BSV	EMERALD SHEET VINYL
BSV	NEW SHEET VINYL

FINISH PLAN GENERAL NOTES

- CARRY TILE THROUGH PRIVATE OFFICE
 OPEN OFFICE CONCEALED SUPPORTING
 OFFICE SPACES



1 2ND LEVEL FINISH PLAN
 SCALE: 1/8" = 1'-0"

PROJECT
 505 HORTON ROAD FLOOR

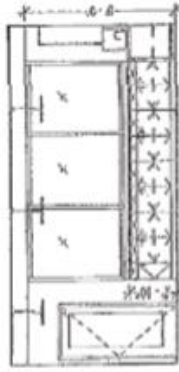
PROJECT NO. NA
DATE 11/05/15
REFERENCE
SCALE 1/8" = 1'-0"
TITLE

CRISTONE FINISH PLAN

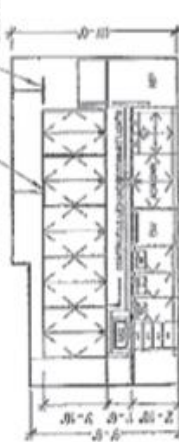
SK-002



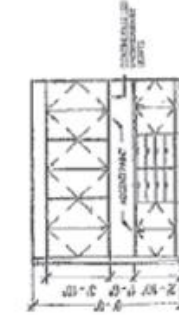
DGA | www.dga.com | 610.261.1000
 200 Delaware Avenue, Suite 2000
 Philadelphia, PA 19106
 4800 Walnut Street, Suite 2000
 Philadelphia, PA 19106



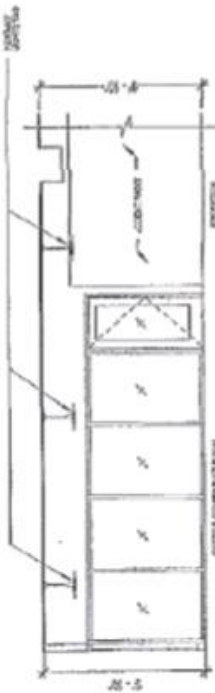
1 BREAKROOM - NORTH ELEVATION
 SCALE 3/16" = 1'-0"



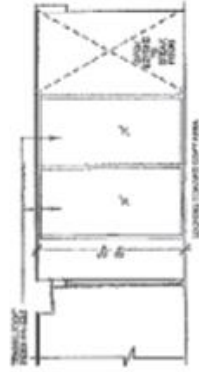
2 BREAKROOM - EAST ELEVATION
 SCALE 3/16" = 1'-0"



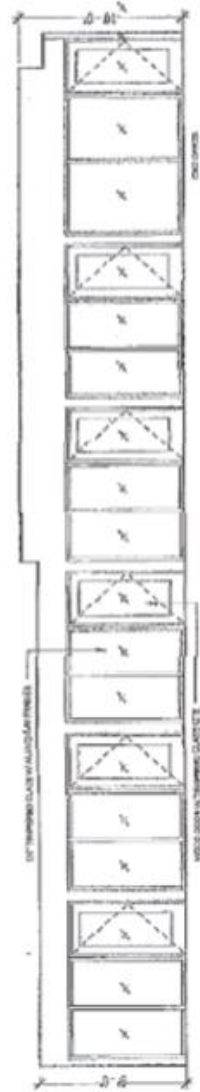
3 COPY/PRINT - ELEVATION
 SCALE 3/16" = 1'-0"



5 CONFERENCE ROOM STOREFRONT - ELEVATION
 SCALE 3/16" = 1'-0"



4 TRANSLUCENT PANELS - ELEVATION
 SCALE 3/16" = 1'-0"



6 TYPICAL OFFICE STOREFRONT - ELEVATION
 SCALE 3/16" = 1'-0"

PROJECT: 2681 HORIZONTAL FLOOR
 PROJECT NO.: NA
 DATE: 11/09/16
 REFERENCE: 2115-107
 SCALE: 3/16" = 1'-0"
 TITLE: CRITSTONE INTERIOR ELEVATIONS

SK-004

EXHIBIT C-1

LABORATORY RULES AND REGULATIONS

1. Any laboratory equipment (glass and cage washers, sterilizers, centrifuges, etc.) being used during normal business hours must be properly insulated for noise to prevent interruption of other tenants' businesses. Landlord reserves the right to request all equipment be reasonably insulated prior to occupancy. Should other tenants complain of noise, lab tenant will be responsible for abating any noise issues, at their sole cost.
2. Any damages to property due to leaks from lab equipment of Tenant will be the sole responsibility of the Tenant. Should damage occur in other Tenant spaces, any and all damages and clean up will be the responsibility of equipment owner (lab tenant).
3. Animal activities are a recognized and necessary process in the biotech industry. It can only be conducted by lab tenants pursuant to all the requirements of their respective lease (including the "Use" clause) and requires specific, written approval by Landlord in advance. We also expect any animal operations to be conducted pursuant to all regulations, standards and best industry practices relating to them.
4. The EmeryStation Campus is a mixed-use facility and lab tenants share space with office tenants. To reduce the potential interaction with office tenants and their employees and visitors with any biotech animal operations; animal testing performed; deliveries of animals and any equipment, foods, cleaners, etc. associated with animal activities must be coordinated through the Loading Dock after hours and with the cooperation of the building management and security personnel. Tenant should make every effort to handle any deliveries relating to animal activities outside of Building Standard Hours. The freight elevator must be used at all times, and delivery trucks should not be visible to the other tenants in the campus area. No cartons, containers or cardboard boxes bearing the nature of contents may be stored or left in common area spaces, to include any garage/freight areas. Feed bags, animal carriers, and any and all containers must be disposed of properly and with discretion.
5. All exterior signage relating to laboratory operations (i.e. visible to common areas including corridors) must be kept to the minimum required by law. All signs must have Landlord's approval prior to installation.

EXHIBIT C-2

RULES AND REGULATIONS

1. No sidewalks, entrance, passages, courts, elevators, vestibules, stairways, corridors or halls shall be obstructed or encumbered by Tenant or used for any purpose other than ingress and egress to and from the Premises and if the Premises are situated on the ground floor of the Project, Tenant shall further, at Tenant's own expense, keep the sidewalks and curb directly in front of the Premises clean and free from rubbish.

2. No awning or other projection shall be attached to the outside walls or windows of the Project without the prior written consent of Landlord, No curtains, blinds, shades, drapes or screens shall be attached to or hung in, or used in connection with any window or door of the Premises, without the prior written consent of Landlord which will not be unreasonably withheld, conditioned or delayed. Such awnings, projections, curtains, blinds, shades, drapes, screens and other fixtures must be of a quality, type, design, color, material and general appearance approved by Landlord, and shall be attached in the manner reasonably approved by Landlord. All lighting fixtures hung in offices or spaces which can be seen from outside the Premises must be of a quality, type, design, bulb color, size and general appearance reasonably approved by Landlord.

3. No sign, advertisement, notice, lettering, decoration or other thing shall be exhibited, inscribed, painted or affixed by Tenant on any part of the outside of the Premises or of the Project, without the prior written consent of Landlord. In the event of the violation of the foregoing by Tenant, Landlord may remove same without any liability, and may charge the expense incurred by such removal to Tenant.

4. The sashes, sash doors, skylights, windows and doors that reflect or admit light or air into the halls, passageways or other public places in the Project shall not be covered or obstructed by Tenant, nor shall any bottles, parcels or other articles be placed on the window sills that can be seen from outside the Premises or in the public portions of the Project.

5. No showcases or other articles shall be put in front of or affixed to any part of the exterior of the Project, nor placed in public portions thereof without the prior written consent of Landlord.

6. The water and wash closets and other plumbing fixtures shall not be used for any purposes other than those for which they were constructed, and no sweepings, rubbish, rags or other substances shall be thrown therein. All damages resulting from any misuse of the fixtures shall be borne by Tenant to the extent that Tenant or Tenant's agents, servants, employees, contractors, visitors or licensees shall have caused the same.

7. Tenant shall not mark, paint, drill into or in any way deface any part of the Premises or the Project other than Decoration which is permitted under the Lease. No boring, cutting or stringing of wires belonging to Landlord shall be permitted, except with the prior written consent of Landlord, and as Landlord may direct.

8. No animal or bird of any kind shall be brought into or kept in or about the Premises or the Project, except seeing-eye dogs or other seeing-eye animals.

9. Prior to leaving the Premises for the day, Tenant shall extinguish all lights other than safety lights and ambient lighting.

10. Tenant shall not make, or permit to be made, any unseemly or disturbing noises or disturb or interfere with occupants of the Project, or neighboring buildings or premises, or those having business with them. Tenant shall not throw anything out of the doors, windows or skylights or down the passageways.

11. Neither Tenant nor any of Tenant's agents, servants, employees, contractors, visitors or licensees shall at any time bring or keep upon the Premises any flammable, combustible or explosive fluid, chemical or substance, except for such items which are used by Tenant in the conduct of its business.

12. No additional locks, bolts or mail slots of any kind shall be placed upon any of the doors or windows by Tenant, nor shall any change be made in existing locks or the mechanism thereof. Tenant must, upon the termination of the tenancy, restore to Landlord all keys of stores, offices and toilet rooms, either furnished to, or otherwise procured by Tenant, and in the event of the loss of any keys so furnished, Tenant shall pay to Landlord the cost thereof.

13. All removals, or the carrying in or out of any safes, freight, furniture, construction material, bulky matter or heavy equipment of any description must take place during the hours which Landlord or its agent may reasonably determine from time to time. Landlord reserves the right to prescribe the weight and position of all safes, which must be placed upon two-inch thick plank strips to distribute the weight. The moving of safes, freight, furniture, fixtures, bulky matter or heavy equipment of any kind must be made upon previous notice to the Building Manager and in a manner and at times prescribed by him, and the persons employed by Tenant for such work are subject to Landlord's prior approval. Landlord reserves the right to inspect all safes, freight or other bulky articles to be brought into the Project and to exclude from the Project all safes, freight or other bulky articles which violate any of these Rules and Regulations or the Lease of which these Rules and Regulations are a part.

14. Tenant shall not purchase janitorial or maintenance or other like service from any company or persons not approved by Landlord, Landlord shall approve a sufficient number of sources of such services to provide Tenant with a reasonable selection, but only in such instances and to such extent as Landlord in its judgment shall consider consistent with security and proper operation of the Project.

15. Landlord shall have the right to prohibit any advertising conducted by Tenant referring to the Project which, in Landlord's reasonable opinion, tends to impair the reputation of the Project or its desirability as a first class building for offices and/or commercial services and upon notice from Landlord, Tenant shall refrain from or discontinue such advertising.

16. Landlord reserves the right to exclude from the Project between the hours of 6:00 p.m. and 8:00 a.m. Monday through Friday, after 1:00 p.m. on Saturdays and at all hours Sundays and legal holidays, all persons who do not present a pass to the Project issued by Landlord. Landlord may furnish passes to Tenant so that Tenant may validate and issue same, Tenant shall safeguard said passes and shall be responsible for all acts of persons in or about the Project who possess a pass issued to Tenant. Tenant's vendors and contractors will, prior to commencing any work on the Premises or Property, provide the Building Manager with a certificate of insurance that demonstrates insurance coverage amounts and limits determined by Landlord and which name Landlord and Building Manager as co-insureds.

17. Tenant's contractors shall, while in the Premises or elsewhere in the Project, be subject to and under the control and direction of the Building Manager (but not as agent or servant of said Building Manager or of Landlord).

18. If the Premises is or becomes infested with vermin as a result of the use or any misuse or neglect of the Premises by Tenant, its agents, servants, employees, contractors, visitors or licensees, Tenant shall forthwith at Tenant's expense cause the same to be exterminated from time to time to the satisfaction of Landlord and shall employ such licensed exterminators as shall be approved in writing in advance by Landlord.

19. The requirements of Tenant will be attended to only upon application at the office of the Project. Project personnel shall not perform any work or do anything outside of their regular duties unless under special instructions from the office of the Landlord.

20. Canvassing, soliciting and peddling in the Project are prohibited.

21. No water cooler, air conditioning unit or system or other apparatus shall be installed or used by Tenant without the written consent of Landlord which shall not be unreasonably withheld, conditioned or delayed.

22. There shall not be used in any premises, or in the public halls, plaza areas, lobbies, or elsewhere in the Project, either by Tenant or by jobbers or others, in the delivery or receipt of merchandise, any hand trucks or dollies, except those equipped with rubber tires and sideguards.

23. Tenant, Tenant's agents, servants, employees, contractors, licensees, or visitors shall not park any vehicles in any driveways, service entrances, or areas posted "No Parking" and shall comply with any other parking restrictions imposed by Landlord from time to time.

24. Tenant shall install and maintain, at Tenant's sole cost and expense, an adequate visibly marked (at all times properly operational) fire extinguisher next to any duplicating or photocopying machine or similar heat producing equipment, which may or may not contain combustible material, in the Premises.

25. 26. Tenant shall not use the name of the Project for any purpose other than as the address of the business to be conducted by Tenant in the Premises, nor shall Tenant use any picture of the Project in its advertising, stationery or in any other manner without the prior written permission of Landlord. Landlord expressly reserves the right at any time to change said name without in any manner being liable to Tenant therefor.

27. Tenant shall not prepare any food nor do any cooking, operate or conduct any restaurant, luncheonette or cafeteria for the sale or service of food or beverages to its employees or to others, except that food and beverage preparation by Tenant's employees using microwave ovens or coffee makers shall be permitted provided no odors of cooking or other processes emanate from the Premises. Tenant shall not install or permit the installation or use of any vending machine except by such persons and in such manner as are approved in advance in writing by Landlord.

28. The Premises shall not be used as an employment agency, a public stenographer or typist, a labor union office, a physician's or dentist's office, a dance or music studio, a school, a beauty salon, or barber shop, the business of photographic, multilith or multigraph reproductions or offset printing (not precluding using any part of the Premises for photographic, multilith or multigraph reproductions solely in connection with Tenant's own business and/or activities), a restaurant or bar, an establishment for the sale of confectionery, soda, beverages, sandwiches, ice cream or baked goods, an establishment for preparing, dispensing or consumption of food or beverages of any kind in any manner whatsoever, or news or cigar stand, or a radio, television or recording studio, theatre or exhibition hall, or manufacturing, or the storage or sale of merchandise, goods, services or property of any land at wholesale, retail or auction, or for lodging, sleeping or for any immoral purposes,

29. Business machines and mechanical equipment shall be placed and maintained by Tenant at Tenant's expense in settings sufficient in Landlord's judgment to absorb and prevent vibration, noise and annoyance. Tenant shall not install any machine or equipment which causes noise, heat, cold or vibration to be transmitted to the structure of the building in which the Premises are located without Landlord's prior written consent, which consent may be conditioned on such terms as Landlord may require. Tenant shall not place a load upon any floor of the Premises exceeding the floor load per square foot that such floor was designed to carry and which is allowed by Law.

30. Tenant shall not bring any Hazardous Materials onto the Premises except for those that are in general commercial use and are incidental to Tenant's business office operations and only in quantities suitable for immediate use.

31. Tenant shall not store any vehicle within the parking area. Tenant's parking rights are limited to the use of parking spaces for short-term parking, of up to twenty-four (24) hours, of vehicles utilized in the normal and regular daily travel to and from the Project. Tenants who wish to park a vehicle for longer than a twenty-four (24)-hour period shall notify the Building Manager for the Project and consent to such long-term parking may be granted for periods up to two (2) weeks. Any motor vehicles parked without the prior written consent of the Building Manager for the Project for longer than a twenty-four (24)-hour period shall be deemed stored in violation of this rule and regulation and shall be towed away and stored at the owner's expense or disposed of as provided by Law.

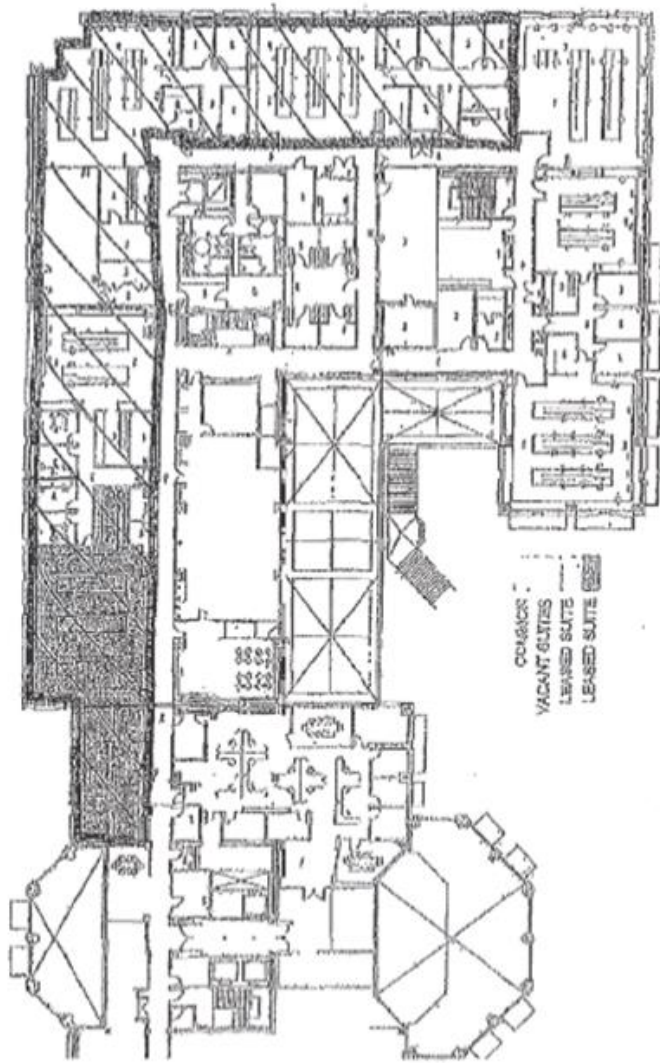
32. Smoking is prohibited in the Premises, the Building and all enclosed Common Areas of the Project, including all lobbies, all hallways, all elevators and all lavatories.

EXHIBIT D

SPACE TO WHICH RIGHT OF FIRST OFFER APPLIES

RIDER-1

WAREHAM
COMMERCIAL REAL ESTATE
1888 HORTON STREET
EVERETT, WA 98149



CORRIDOR
VACANT SUITE
LEASED SUITE
LEASED SUITE



DOB: [redacted] / [redacted] / [redacted]
415-574

FLOOR 2

LEASE

by and between

BMR-SIDNEY RESEARCH CAMPUS LLC,
a Delaware limited liability company

and

GRITSTONE ONCOLOGY, INC.
a Delaware corporation

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LEASE

THIS LEASE (this "Lease") is entered into as of this 11th day of February, 2016 (the "Execution Date"), by and between BMR-Sidney Research Campus LLC, a Delaware limited liability company ("Landlord"), and Gritstone Oncology, Inc., a Delaware corporation ("Tenant").

RECITALS

A. WHEREAS, Landlord owns certain real property (the "Property") and the improvements on the Property located at 40 Erie Street and 200 Sidney Street, Cambridge, Massachusetts, including the buildings located thereon; and

B. WHEREAS, Landlord wishes to lease to Tenant, and Tenant desires to lease from Landlord, certain premises (the "Premises") located on the basement and first floor of the building located at 40 Erie Street (the "Building"), pursuant to the terms and conditions of this Lease, as detailed below.

AGREEMENT

NOW, THEREFORE, Landlord and Tenant, in consideration of the mutual promises contained herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound, agree as follows:

1. Lease of Premises.

1.1 Effective on the Term Commencement Date (as defined below), Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, the Premises, as shown on Exhibit A attached hereto, including exclusive shafts, cable runs, mechanical spaces and rooftop areas, for use by Tenant in accordance with the Permitted Use (as defined below) and no other uses (except that (i) the Waste Storage Room (as defined below) and (ii) any Rooftop Installation Area (as hereinafter defined) designated after the date hereof are explicitly not part of the Premises demised under this Lease). The Property and all landscaping, parking facilities, private drives and other improvements and appurtenances related thereto, including the Building, the 200 Sidney Street Building (as hereinafter defined), and the parking garage located at 47 Erie Street in Cambridge, Massachusetts (to the extent of Landlord's interest therein) (the "Parking Garage"), are hereinafter collectively referred to as the "Project." All portions of the Building that are for the non-exclusive use of the tenants of the Building only, and not the tenants of the Project generally, including but not limited to service corridors, stairways, elevators, public restrooms and public lobbies (all to the extent located in the Building), are hereinafter referred to as "Building Common Area." All portions of the Project that are for the non-exclusive use of tenants of the Project generally, including driveways, sidewalks, parking areas, the Parking Garage, landscaped areas, and service corridors, stairways, and elevators (but excluding Building Common Area), are hereinafter referred to as "Project Common Area." The Building Common Area and Project Common Area are collectively referred to herein as "Common Area."

2. **Basic Lease Provisions.** For convenience of the parties, certain basic provisions of this Lease are set forth herein. The provisions set forth herein are subject to the remaining terms and conditions of this Lease and are to be interpreted in light of such remaining terms and conditions.

2.1 This Lease shall take effect upon the Execution Date and, except as specifically otherwise provided within this Lease, each of the provisions hereof shall be binding upon and inure to the benefit of Landlord and Tenant from the date of execution and delivery hereof by all parties hereto.

2.2 In the definitions below, each current Rentable Area (as defined below) is expressed in square feet. Rentable Area and “Tenant’s Pro Rata Share” are both subject to adjustment as provided in this Lease.

<u>Definition or Provision</u>	<u>Means the Following (As of the Term Commencement Date)</u>
Approximate Rentable Area of Premises	13,907 square feet
Approximate Rentable Area of Building	106,638 square feet
Tenant’s Pro Rata Share of Building	13.04%

2.3 Monthly and annual installments of Base Rent for the Premises (“Base Rent”) as of the Rent Commencement Date (as defined below), subject to adjustment under this Lease:

<u>Dates</u>	<u>Square Feet of Rentable Area</u>	<u>Base Rent per Square Foot of Rentable Area</u>	<u>Monthly Base Rent</u>	<u>Annual Base Rent</u>
Rent Commencement Date—The day prior to first (1 st) anniversary of Term Commencement Date	13,907	\$68.00 annually	\$ 78,806.33	\$945,676.00

2.4 Estimated Term Commencement Date: October 4, 2016

2.5 Estimated Term Expiration Date: April 30, 2022

2.6 Security Deposit: \$315,225

2.7 Permitted Use: Office and laboratory use (including lawful uses customarily accessory thereto) in conformity with all federal, state, municipal and local laws, codes, ordinances, rules and regulations of Governmental Authorities (as defined below), committees, associations, or other regulatory committees, agencies or governing bodies having jurisdiction over the Premises, the Building, the Property, the Project, Landlord or Tenant, including both statutory and common law and hazardous waste rules and regulations (“Applicable Laws”). Tenant acknowledges and agrees that, notwithstanding anything in this Lease to the contrary, pursuant to Applicable Laws, the portion of the Premises located in the basement of the Building is not permitted to be occupied by human beings and may only be used for storage purposes or other uses that are included within the Permitted Use that do not involve or require occupancy by human beings (other than ingress and egress as needed for purposes of storage which is permitted).

2.8 Address for Rent Payment:

BMR-Sidney Research Campus LLC
Attention Entity 652
P.O. Box 511415
Los Angeles, California 90051-7970

2.9 Address for Notices to Landlord:

BMR-Sidney Research Campus LLC
17190 Bernardo Center Drive
San Diego, California 92128
Attn: Real Estate Legal Department

2.10 Address for Notices to Tenant:

Gritstone Oncology
5858 Horton Street, Suite 210
Emeryville, CA 94608
Attention: Matt Hawryluk

2.11 Address for Invoices to Tenant:

Gritstone Oncology
5858 Horton Street, Suite 210
Emeryville, CA 94608
Attention: Matt Hawryluk

2.12 The following Exhibits are attached hereto and incorporated herein by reference:

Exhibit A	Premises
Exhibit B	Work Letter
Exhibit B-1	Tenant Work Insurance Requirements
Exhibit B-2	Landlord’s Work
Exhibit C	Acknowledgement of Term Commencement Date and Term Expiration Date

Exhibit D	Plan of Premises Layout Zones
Exhibit E	Form of Letter of Credit
Exhibit F	Intentionally Omitted
Exhibit G	Rules and Regulations
Exhibit H	PTDM
Exhibit I	Tenant's Personal Property
Exhibit J	Form of Estoppel Certificate

3. Term. The actual term of this Lease (as the same may be extended pursuant to Article 42 hereof, and as the same may be earlier terminated in accordance with this Lease, the "Term") shall commence on the actual Term Commencement Date (as defined in Article 4) and end on the date (the "Term Expiration Date") that is sixty-three (63) months after the Rent Commencement Date, subject to extension or earlier termination of this Lease as provided herein.

4. Possession and Commencement Date.

4.1 Landlord shall use commercially reasonable efforts to tender possession of the Premises to Tenant on the Estimated Term Commencement Date, with the work in the Premises (the "Tenant Improvements") required of Landlord described in the Work Letter attached hereto as Exhibit B (the "Work Letter") and the work in the Common Areas described in Exhibit B-2 (the "Landlord's Work") Substantially Complete (as defined below). Tenant agrees that in the event such work is not Substantially Complete on or before the Estimated Term Commencement Date for any reason, then (a) this Lease shall not be void or voidable except as otherwise provided in this Section 4.1, (b) Landlord shall not be liable to Tenant for any loss or damage resulting therefrom, (c) the Term Expiration Date shall be extended accordingly (subject to Tenant's right to terminate set forth in this Section 4.1), (d) Tenant shall not be responsible for the payment of any Base Rent until the actual Term Commencement Date as described in Section 4.2 occurs and (e) Tenant shall not be responsible for the payment of Operating Expenses until the actual Term Commencement Date occurs, except as otherwise provided in Section 9.5 below. The term "Substantially Complete" or "Substantial Completion" means that (a) the Tenant Improvements are substantially complete in accordance with the Approved Plans (as defined in the Work Letter) as reasonably determined by Landlord's architect, except for minor punch list items and (b) the Landlord's Work is substantially complete, as reasonably determined by Landlord's architect, except for minor punch list items. Notwithstanding anything in this Lease (including the Work Letter) to the contrary, (y) Landlord's obligation to timely achieve Substantial Completion shall be subject to extension on a day-for-day basis as a result of Force Majeure (as defined below) or a Tenant Delay (as defined below) and (z) if there has been no Force Majeure or Tenant Delay and Landlord fails to deliver the Premises to Tenant with the Tenant Improvements Substantially Complete (i) on or before the date that is fifty (50) days after the Estimated Term Commencement Date, Base Rent shall be abated one (1) day for each day after the Estimated Term Commencement Date that Landlord fails to deliver the Premises to Tenant with the Tenant Improvements Substantially Complete and (ii) on or before January 31, 2018, Tenant shall have the right to terminate this Lease and Landlord shall return all payments of Rent, the Security Deposit and other sums paid by Tenant to Landlord in connection with this Lease.

4.2 The “Term Commencement Date” shall be the day Landlord tenders possession of the Premises to Tenant with the Tenant Improvements Substantially Complete. If possession is delayed by action of Tenant, then the Term Commencement Date shall be the date that the Term Commencement Date would have occurred but for such delay. Tenant shall execute and deliver to Landlord written acknowledgment of the actual Term Commencement Date and the Term Expiration Date within ten (10) days after Tenant takes occupancy of the Premises, in the form attached as Exhibit C hereto. Failure to execute and deliver such acknowledgment, however, shall not affect the Term Commencement Date or Landlord’s or Tenant’s liability hereunder. Failure by Tenant to obtain validation by any medical review board or other similar governmental licensing of the Premises required for the Permitted Use by Tenant shall not serve to extend the Term Commencement Date.

4.3 Tenant shall be entitled to enter upon the Premises no more than thirty (30) days prior to the Term Commencement Date, subject to the written approval of Landlord, which approval shall not be unreasonably withheld, conditioned or delayed, for the sole purposes of installing improvements and/or the placement of personal property. Tenant shall furnish to Landlord evidence satisfactory to Landlord in advance of any such entry date that insurance coverages required of Tenant under the provisions of Article 23 are in effect, and such entry shall be subject to all the terms and conditions of this Lease, other than the payment of Base Rent (as defined below) and Operating Expenses, but only with respect to Operating Expenses if Tenant’s responsibility for the payment of Operating Expenses is excused as provided in Section 9.6 below; and provided, further, that if the Term Commencement Date is delayed due to such early access, then the Term Commencement Date shall be the date that the Term Commencement Date would have occurred but for such delay.

4.4 Landlord shall cause the Tenant Improvements to be constructed in the Premises pursuant to the Work Letter at a cost to Landlord not to exceed (a) Two Million Eighty-Six Thousand Fifty and 00/100 Dollars (\$2,086,050.00) (based upon One Hundred Fifty Dollars (\$150.00) per square foot of Rentable Area) (the “Base TI Allowance”), plus (b) up to One Thousand Three Hundred Ninety and 00/100 Dollars (\$1,390.00) (the “A&E Allowance”), for a total of Two Million Eighty-Seven Thousand Four Hundred Forty and 00/100 Dollars (\$2,087,440.00). The Base TI Allowance, together with the A&E Allowance, shall be referred to herein as the “TI Allowance.” The TI Allowance may be applied to the costs of (m) construction, (n) project management by Landlord (which fee shall equal three percent (3%) of the cost of the Tenant Improvements, including the Tenant Improvement Allowance), (o) commissioning of mechanical, electrical and plumbing systems by a licensed, qualified commissioning agent hired by Landlord, and review of such party’s commissioning report by a licensed, qualified commissioning agent hired by Tenant, (p) space planning, architect, engineering and other related services performed by third parties unaffiliated with Tenant, (q) building permits and other taxes, fees, charges and levies by Governmental Authorities (as defined below) for permits or for inspections of the Tenant Improvements, and (r) costs and expenses for labor, material, equipment and fixtures. The A&E Allowance may be applied to the costs of space planning and architectural, engineering and related services performed by third parties unaffiliated with Tenant for the Tenant Improvements. In no event shall the TI Allowance be used for (v) the cost of work that is not authorized by the Approved Plans (as defined in the Work Letter) or otherwise approved in writing by Landlord, (w) payments to Tenant or any affiliates of Tenant, (x) the purchase of any furniture, personal property or other non-building system equipment, (y) costs resulting from any default by Tenant of its obligations under this Lease or (z) costs that are recoverable by Tenant from a third party (e.g., insurers, warrantors, or tortfeasors).

4.5 Tenant shall have until the date that is three (3) months after the Term Commencement Date (the “TI Deadline”) to expend the unused portion of the T1 Allowance, after which date Landlord’s obligation to fund such costs shall expire.

4.6. In no event shall any unused TI Allowance entitle Tenant to a credit against Rent payable under this Lease.

4.7. Notwithstanding anything to the contrary in this Lease, Landlord and Tenant agree that all Tenant Improvements and Alterations (as hereinafter defined) shall (a) be programmed in accordance with the lab and office zones identified on Exhibit D attached hereto, and (b) incorporate flexible wall and lab bench systems.

5. Condition of Premises. Tenant acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty with respect to the condition of the Premises, the Building or the Project, or with respect to the suitability of the Premises, the Building or the Project for the conduct of Tenant’s business. Tenant acknowledges that (a) it is fully familiar with the condition of the Premises and agrees to take the same in its condition “as is” as of the Term Commencement Date and (b) Landlord shall have no obligation to alter, repair or otherwise prepare the Premises for Tenant’s occupancy or to pay for or construct any improvements to the Premises, except with respect to the completion of the Landlord’s Work and except with respect to the payment of the Base TI Allowance and the A&E Allowance. Tenant’s taking of possession of the Premises shall, except as otherwise agreed to in writing by Landlord and Tenant, conclusively establish that the Premises, the Building and the Project were at such time in good, sanitary and satisfactory condition and repair. For the avoidance of doubt, the act of Tenant taking possession of the Premises shall not constitute a waiver of Landlord’s obligations under Section 18 hereof.

6. Rentable Area.

6.1 The term “Rentable Area” shall reflect such areas as reasonably calculated by Landlord’s architect, as the same may be reasonably adjusted from time to time by Landlord in consultation with Landlord’s architect to reflect changes to the Premises, the Building or the Project, as applicable.

6.2 The Rentable Area of the Building is generally determined by making separate calculations of Rentable Area applicable to each floor within the Building and totaling the Rentable Area of all floors within the Building. The Rentable Area of a floor is computed by measuring to the outside finished surface of the permanent outer Building walls. The full area calculated as previously set forth is included as Rentable Area, without deduction for columns and projections or vertical penetrations, including stairs, elevator shafts, flues, pipe shafts, vertical ducts and the like, as well as such items’ enclosing walls.

6.3 The term “Rentable Area,” when applied to the Premises, is that area equal to the usable area of the Premises, plus an equitable allocation of Rentable Area within the Building that is not then utilized or expected to be utilized as usable area, including that portion of the Building devoted to corridors, equipment rooms, restrooms, elevator lobby, atrium and mailroom.

6.4 The Rentable Area of the Project is the total Rentable Area of the Building.

6.5 Review of allocations of Rentable Areas as between tenants of the Building shall be made as frequently as Landlord deems appropriate, including in order to facilitate an equitable apportionment of Operating Expenses (as defined below). If such review is by a licensed architect and allocations are certified by such licensed architect as being correct, then Tenant shall be bound by such certifications.

7. Rent.

7.1 Tenant shall pay to Landlord as Base Rent for the Premises, commencing on the date that is three (3) months after the Term Commencement Date (the "Rent Commencement Date"), the sums set forth in Section 2.3, subject to the rental adjustments provided in Article 8 hereof. Base Rent shall be paid in equal monthly installments as set forth in Section 2.3, subject to the rental adjustments provided in Article 8 hereof, each in advance on the first day of each and every calendar month during the Term.

7.2 In addition to Base Rent, Tenant shall pay to Landlord as additional rent ("Additional Rent") at times hereinafter specified in this Lease (a) Tenant's Adjusted Share (as defined below) of Operating Expenses (as defined below), (b) the Property Management Fee (as defined below), (c) sums due for consulting services provided to Tenant by Landlord, at Tenant's written request, if those services exceed the customary tenant-servicing efforts of Landlord in Landlord's reasonable discretion (with Landlord having sole discretion with respect to the provision of such services (if any) and how those services will be billed to Tenant, including the use of a taxable subsidiary to provide such services and bill for the same, and (d) any other amounts that Tenant assumes or agrees to pay under the provisions of this Lease that are owed to Landlord, including any and all other sums that may become due by reason of any default of Tenant or failure on Tenant's part to comply with the agreements, terms, covenants and conditions of this Lease to be performed by Tenant, after notice and the lapse of any applicable cure periods.

7.3 Base Rent and Additional Rent shall together be denominated "Rent." Rent shall be paid to Landlord, without abatement, deduction or offset, in lawful money of the United States of America to the address set forth in Section 2.8 or to such other person or at such other place as Landlord may from time designate in writing. In the event the Term commences or ends on a day other than the first day of a calendar month, then the Rent for such fraction of a month shall be prorated for such period on the basis of the number of days in the month and shall be paid at the then-current rate for such fractional month.

7.4 Tenant's obligation to pay Rent shall not be discharged or otherwise affected by (a) any Applicable Laws now or hereafter applicable to the Premises, (b) any other restriction on Tenant's use, (c) except as expressly provided herein, any casualty or taking or (d) any other occurrence; and except as expressly herein, Tenant waives all rights now or hereafter existing to terminate or cancel this Lease or quit or surrender the Premises or any part thereof, or to assert any defense in the nature of constructive eviction to any action seeking to recover Rent. Tenant's

obligation to pay Rent with respect to any period or obligations arising, existing or pertaining to the period prior to the date of the expiration or earlier termination of the Term or this Lease shall survive any such expiration or earlier termination; provided, however, that nothing in this sentence shall in any way affect Tenant's obligations with respect to any other period.

8. Rent Adjustments. Base Rent shall be subject to an annual upward adjustment of three percent (3%) of the then-current Base Rent. The first such adjustment shall become effective commencing on the first (1st) annual anniversary of the Term Commencement Date, and subsequent adjustments shall become effective on every successive annual anniversary for so long as this Lease continues in effect. The amount of Base Rent during any extension period shall be governed by Article 42 hereof.

9. Operating Expenses.

9.1 As used herein, the term "Operating Expenses" shall include:

(a) Government impositions, including property tax costs consisting of real and personal property taxes (including amounts due under any improvement bond upon the Building or the Project (including the parcel or parcels of real property upon which the Building, the other buildings in the Project and areas serving the Building and the Project are located) or assessments in lieu thereof imposed by any federal, state, regional, local or municipal governmental authority, agency or subdivision (each, a "Governmental Authority"); taxes on or measured by gross rentals received from the rental of space in the Project; taxes based on the square footage of the Premises, the Building or the Project, as well as any parking charges, utilities surcharges or any other costs levied, assessed or imposed by, or at the direction of, or resulting from Applicable Laws or interpretations thereof, promulgated by any Governmental Authority in connection with the use or occupancy of the Project or the parking facilities serving the Project, including without limitation the Parking Garage; taxes on this transaction or any document to which Tenant is a party creating or transferring an interest in the Premises; any fee for a business license to operate an office building; and any expenses, including the reasonable cost of attorneys or experts, reasonably incurred by Landlord in seeking reduction by the taxing authority of the applicable taxes (other than those excluded in Section 9.1(c)), less tax refunds obtained as a result of an application for review thereof. Operating Expenses shall not include any penalties, fines and interest incurred by reason of Landlord's failure to timely pay any taxes or other impositions of a Governmental Authority provided such failure did not arise out of Tenant's failure to timely pay Rent hereunder; and

(b) All other costs of any kind paid or incurred by Landlord in connection with the operation or maintenance of the Building and the Project, which shall include Project office rent at fair market rental for a commercially reasonable amount of space for Project management personnel, to the extent an office used for Project operations is maintained at the Project, plus customary expenses for such office, and costs of repairs and replacements to improvements within the Project as appropriate to maintain the Project as required hereunder, including costs of funding such reasonable reserves as Landlord, consistent with good business practice, may establish to provide for future repairs and replacements; costs of utilities furnished to the Common Area; costs associated with the operation of food trucks for the benefit of employees of tenants at the Project; sewer fees; cable television; trash collection; cleaning, including windows; heating, ventilation

and air-conditioning (“HVAC”); maintenance of landscaping and grounds; snow removal; maintenance of drives and parking areas, including without limitation the Parking Garage; maintenance of the roof; security services and devices; building supplies; maintenance or replacement of equipment utilized for operation and maintenance of the Project; license, permit and inspection fees; sales, use and excise taxes on goods and services purchased by Landlord in connection with the operation, maintenance or repair of the Building or Project systems and equipment; telephone, postage, stationery supplies and other expenses incurred in connection with the operation, maintenance or repair of the Project; accounting, legal and other professional fees and expenses incurred in connection with the Project; costs of furniture, draperies, carpeting, landscaping supplies, snow removal supplies and other customary and ordinary items of personal property provided by Landlord for use in Common Areas or in the Project office; capital expenditures; costs of complying with Applicable Laws (except to the extent such costs are incurred to remedy non-compliance as of the Execution Date with Applicable Laws); costs to keep the Project in compliance with, or fees otherwise required under, any CC&Rs (as defined below), including condominium fees; insurance premiums, including premiums for commercial general liability, property casualty, earthquake, terrorism and environmental coverages; portions of insured losses paid by Landlord as part of the deductible portion of a loss pursuant to the terms of insurance policies; service contracts; costs of services of independent contractors retained to do work of a nature referenced above; and costs of compensation (including employment taxes and fringe benefits) of all persons who perform regular and recurring duties connected with the day-to-day operation and maintenance of the Project, its equipment, the adjacent walks, landscaped areas, drives and parking areas, including janitors, floor waxers, window washers, watchmen, gardeners, sweepers, plow truck drivers, handymen, and engineering/maintenance personnel.

9.2 Notwithstanding the foregoing, Operating Expenses shall not include any net income, franchise, capital stock, estate or inheritance taxes, or taxes that are the personal obligation of Tenant or of another tenant of the Project; any leasing commissions; expenses (including attorney fees and court costs) incurred in connection with (i) negotiations or disputes with tenants of the Property or other occupants or prospective tenants or other occupants, (ii) the enforcement of any leases or (iii) the defense of Landlord’s title to, or interest in, the Building or any part thereof; costs (including permit, license, and inspection fees) incurred in connection with preparing rental space for a tenant, that relate to preparation of rental space for a tenant or for any subsequent improvements Landlord performs for any other tenant in such tenant’s premises; expenses of initial development and construction, including grading, paving, landscaping and decorating (as distinguished from maintenance, repair and replacement of the foregoing); Landlord’s costs of any services provided to tenants or other occupants for which Landlord is actually reimbursed by such tenants or other occupants (other than reimbursement through Operating Expenses) as an additional charge or rental over and above the basic rent (and escalations thereof) payable under the lease with such tenant or other occupant; costs in connection with services that are provided to another tenant or occupant of the Building, but are not offered to Tenant; capital expenditures, except for those incurred (A) in replacing obsolete equipment, (B) for the primary purpose of reducing Operating Expenses, or (C) required to comply with changes in Applicable Laws that take effect after the Execution Date of the Lease, in each case amortized over the useful life thereof (but in no event more than thirteen (13) years), as reasonably determined by Landlord; costs (i.e., interest and penalties) incurred due to Landlord’s default of this Lease or any other lease, mortgage, or other agreement, in each case affecting the Building or Property; payments to subsidiaries or affiliates of Landlord, or to any other party, in each case as a result of a non-arm’s

length transaction, for management or other services for the Building, or for supplies or other materials for the Building, to the extent that such payments exceed arm's length competitive prices in the Cambridge, Massachusetts market for the services, supplies or materials provided; Landlord's legal existence and general corporate overhead and general administrative expenses; legal expenses relating to other tenants; costs of repairs to the extent reimbursed by payment of insurance proceeds received by Landlord; advertising and promotional expenditures directly related to Landlord's efforts to lease space in the Building; the cost of repairs or other work occasioned by fire, windstorm, or other insured casualty, to the extent Landlord actually receives proceeds of such insurance for such repairs or other work; debt service; interest upon loans to Landlord or secured by a mortgage or deed of trust covering the Project or a portion thereof or any other debt of Landlord (provided that interest upon a government assessment or improvement bond payable in installments shall constitute an Operating Expense under Subsection 9.1(a)); rental payments under any ground lease; the cost of correcting defects in the construction of the Building, Building equipment, Parking Garage, parking lot or other site improvements, but only to the extent such costs are covered by and actually reimbursed to Landlord under any applicable warranty or service contract held by Landlord; costs incurred directly and solely as a result of Landlord's gross negligence or willful misconduct; salaries of employees of Landlord above those performing property management and facilities management duties at the Project; legal and accounting fees not incurred in connection with operation and management of the Building, (including any legal and other costs incurred in connection with the sale, financing, refinancing, syndication, securitization, or change of ownership of the Building, including, without limitation, brokerage commissions, attorneys' and accountants' fees, closing costs, title insurance premiums, points, and interest charges); salaries of executive officers of Landlord; depreciation claimed by Landlord for tax purposes (provided that this exclusion of depreciation is not intended to delete from Operating Expenses actual costs of repairs and replacements and reasonable reserves in regard thereto that are provided for in Subsection 9.1(b)); taxes that are excluded from Operating Expenses in Subsection 9.1(a); costs or expenses incurred in connection with the financing or sale of the Project or any portion thereof; costs expressly excluded from Operating Expenses elsewhere in this Lease or that are charged to or paid by Tenant under other provisions of this Lease; professional fees and disbursements and other costs and expenses related to the ownership (as opposed to the use, occupancy, operation, maintenance or repair) of the Project; political and charitable contributions; costs of environmental testing, monitoring, removal or remediation of any Hazardous Materials in the Building or the Property (other than disposal and recycling of Hazardous Materials customarily found in the operation and use of comparable buildings, such as cleaning supplies) that are in existence at the Building or Property prior to the Term Commencement Date except to the extent caused by Tenant or a Tenant Party (as defined below); the costs of acquiring investment-grade art (which, for the purposes of this Section only, shall mean art that Landlord paid more than \$15,000 to acquire per item on an annual basis) installed in the Building or the Property; and any item that, if included in Operating Expenses, would involve a double collection for such item by Landlord, such as ordinary maintenance and repair costs for the Parking Garage which are included in the parking fee payable by Tenant in accordance with Section 13.4 hereof. To the extent that Tenant uses more than Tenant's Pro Rata Share of any item of Operating Expenses, Tenant shall pay Landlord for such excess in addition to Tenant's obligation to pay Tenant's Pro Rata Share of Operating Expenses (such excess, together with Tenant's Pro Rata Share, "Tenant's Adjusted Share").

9.3 Tenant shall pay to Landlord on the first day of each calendar month of the Term, as Additional Rent, (a) one-twelfth (1/12th) of the Property Management Fee (as defined below) and (b) Landlord's estimate of Tenant's Adjusted Share of Operating Expenses with respect to the Building and the Project, as applicable, for such month.

(a) The "Property Management Fee" shall equal three percent (3%) of Base Rent due from Tenant. Tenant shall pay the Property Management Fee in accordance with Section 9.2 with respect to the entire Term, including any extensions thereof or any holdover periods, regardless of whether Tenant is obligated to pay Base Rent, Operating Expenses or any other Rent with respect to any such period or portion thereof. For the period of time between the Term Commencement Date and Rent Commencement Date, if any, and any period of occupancy prior to the Term as further described in Section 9.5, the Property Management Fee shall be calculated as if Tenant were paying \$85,000.00 per month for Base Rent.

(b) Within ninety (90) days after the conclusion of each calendar year (or such longer period as may be reasonably required by Landlord), Landlord shall furnish to Tenant a statement showing in reasonable detail the actual Operating Expenses, Tenant's Adjusted Share of Operating Expenses, and the cost of providing utilities to the Premises for the previous calendar year ("Landlord's Statement"). Any additional sum due from Tenant to Landlord shall be due and payable within thirty (30) days after receipt of an invoice therefor. If the amounts paid by Tenant pursuant to this Section exceed Tenant's Adjusted Share of Operating Expenses for the previous calendar year, then Landlord shall credit the difference against the Rent next due and owing from Tenant; provided that, if the Lease term has expired, Landlord shall accompany Landlord's Statement with payment for the amount of such difference.

(c) Any amount due under this Section for any period that is less than a full month shall be prorated for such fractional month on the basis of the number of days in the month.

9.4 Landlord may, from time to time, modify Landlord's calculation and allocation procedures for Operating Expenses, so long as such modifications produce Dollar results substantially consistent with Landlord's then-current practice at the Project. Landlord or an affiliate(s) of Landlord currently own other property(ies) adjacent to the Project or its neighboring properties, including but not limited to the building located at 21 Erie Street in Cambridge, Massachusetts (collectively, "Neighboring Properties"). In connection with Landlord performing services for the Project pursuant to this Lease, similar services may be performed by the same vendor(s) for Neighboring Properties (for instance, shuttle services, food truck services or landscaping maintenance). In such a case, Landlord shall reasonably allocate to the Building and the Project the costs for such services based upon the ratio that the square footage of the Building or the Project (as applicable) bears to the total square footage of all of the Neighboring Properties or buildings within the Neighboring Properties for which the services are performed, unless the scope of the services performed for any building or property (including the Building and the Project) is disproportionately more or less than for others, in which case Landlord shall equitably allocate the costs based on the scope of the services being performed for each building or property (including the Building and the Project). Furthermore, the parties acknowledge that the Property contains a separate building known as 200 Sidney Street (the "200 Sidney Street Building"). With respect to any Operating Expenses (including, without limitation, real estate taxes) that apply to the Property as a whole (as opposed to allocated specifically to each of the Building and the 200

Sidney Street Building), Landlord shall reasonably allocate to each building the costs of such Operating Expenses based upon the ratio that the square footage of Rentable Area of each of the Building and the 200 Sidney Street Building, respectively, bears to the total square footage of Rentable Area of two buildings together, or such other equitable allocation as Landlord reasonably determines.

9.5 Landlord's annual statement shall be final and binding upon Tenant unless Tenant, within sixty (60) days after Tenant's receipt thereof, shall contest any item therein by giving written notice to Landlord, specifying each item contested and the reasons therefor; provided that Tenant shall in all events pay the amount specified in Landlord's annual statement, pending the results of the Independent Review (as defined below) and determination of the Accountant(s), as applicable and as each such term is defined below. If, during such sixty (60)-day period, Tenant reasonably and in good faith questions or contests the correctness of Landlord's statement of Tenant's Adjusted Share of Operating Expenses, Landlord shall provide Tenant with reasonable access to Landlord's books and records to the extent relevant to determination of Operating Expenses, and such information as Landlord reasonably determines to be responsive to Tenant's written inquiries. In the event that, after Tenant's review of such information, Landlord and Tenant cannot agree upon the amount of Tenant's Adjusted Share of Operating Expenses, then Tenant shall have the right to have an independent public accounting firm hired by Tenant on an hourly basis and not on a contingent-fee basis (at Tenant's sole cost and expense) and approved by Landlord (which approval Landlord shall not unreasonably withhold or delay) audit and review such of Landlord's books and records for the year in question as directly relate to the determination of Operating Expenses for such year (the "Independent Review"), but not books and records of entities other than Landlord unless such other entities share costs with Landlord, in which event Landlord shall only be obligated to make available the books and records of such other entity to the extent related to the shared costs. Landlord shall make such books and records available at the location where Landlord maintains them in the ordinary course of its business. Landlord need not provide copies of any books or records. Tenant shall commence the Independent Review within fifteen (15) days after the date Landlord has given Tenant access to Landlord's books and records for the Independent Review. Tenant shall complete the Independent Review and notify Landlord in writing of Tenant's specific objections to Landlord's calculation of Operating Expenses (including Tenant's accounting firm's written statement of the basis, nature and amount of each proposed adjustment) no later than sixty (60) days after Landlord has first given Tenant access to Landlord's books and records for the Independent Review. Landlord shall review the results of any such Independent Review. The parties shall endeavor to agree promptly and reasonably upon Operating Expenses taking into account the results of such Independent Review. If, as of the date that is sixty (60) days after Tenant has submitted the Independent Review to Landlord, the parties have not agreed on the appropriate adjustments to Operating Expenses, then the parties shall engage a mutually agreeable independent third party accountant with at least ten (10) years' experience in commercial real estate accounting in the Cambridge, Massachusetts area (the "Accountant"). If the parties cannot agree on the Accountant, each shall within twenty (20) days after such impasse appoint an Accountant (different from the accountant and accounting firm that conducted the Independent Review) and, within twenty (20) days after the appointment of both such Accountants, those two Accountants shall select a third (which cannot be the accountant and accounting firm that conducted the Independent Review). If either party fails to timely appoint an Accountant, then the Accountant the other party appoints shall be the sole Accountant. Within twenty (20) days after appointment of the Accountant(s), Landlord and Tenant shall each

simultaneously give the Accountants (with a copy to the other party) its determination of Operating Expenses, with such supporting data or information as each submitting party determines appropriate. Within twenty (20) days after such submissions, the Accountants shall by majority vote select either Landlord's or Tenant's determination of Operating Expenses. The Accountants may not select or designate any other determination of Operating Expenses. The determination of the Accountant(s) shall bind the parties. If the parties agree or the Accountant(s) determine that the Operating Expenses actually paid by Tenant for the calendar year in question exceeded Tenant's obligations for such calendar year, then Landlord shall, at Tenant's option, either (a) credit the excess to the next succeeding installments of estimated Additional Rent or (b) pay the excess to Tenant within thirty (30) days after delivery of such results. If the parties agree or the Accountant(s) determine that Tenant's payments of Operating Expenses for such calendar year were less than Tenant's obligation for the calendar year, then Tenant shall pay the deficiency to Landlord within thirty (30) days after delivery of such results. In all instances, Tenant shall pay the cost of the Accountant(s), unless the Independent Review or Accountants determine that Operating Expenses paid by Tenant for the calendar year in question exceeded Tenant's obligations by ten percent (10%) or more, in which case, Landlord shall pay all costs of Tenant's audit and review.

9.6 Tenant shall not be responsible for Operating Expenses with respect to any time period prior to the Term Commencement Date; provided, however, that if Landlord shall permit Tenant to occupy and possess the Premises prior to the Term Commencement Date and Tenant operates all or any portion of its business in the Premises prior to the Term Commencement Date, Tenant shall be responsible for Operating Expenses from such earlier date of possession (the Term Commencement Date or such earlier date, as applicable, the "Expense Trigger Date"); and provided, further, that Landlord may annualize certain Operating Expenses incurred prior to the Expense Trigger Date over the course of the budgeted year during which the Expense Trigger Date occurs, and Tenant shall be responsible for the annualized portion of such Operating Expenses corresponding to the number of days during such year, commencing with the Expense Trigger Date, for which Tenant is otherwise liable for Operating Expenses pursuant to this Lease. Tenant's responsibility for Tenant's Adjusted Share of Operating Expenses shall continue to the latest of (a) the date of termination of the Lease, (b) the date Tenant has fully vacated the Premises and (c) if termination of the Lease is due to a default by Tenant, the date of rental commencement of a replacement tenant.

9.7 Operating Expenses for the calendar year in which Tenant's obligation to share therein commences and for the calendar year in which such obligation ceases shall be prorated on a basis reasonably determined by Landlord. Expenses such as taxes, assessments and insurance premiums that are incurred for an extended time period shall be prorated based upon the time periods to which they apply so that the amounts attributed to the Premises relate in a reasonable manner to the time period wherein Tenant has an obligation to share in Operating Expenses.

9.8 Within thirty (30) days after the end of each calendar month, Tenant shall submit to Landlord an invoice, or, in the event an invoice is not available, an itemized list, of all costs and expenses that (a) Tenant has incurred (either internally or by employing third parties) during the prior month and (b) for which Tenant reasonably believes it is entitled to reimbursements from Landlord pursuant to the terms of this Lease.

9.9 In the event that the Building or Project is less than fully occupied during a calendar year, Tenant acknowledges that Landlord may extrapolate Operating Expenses that vary depending on the occupancy of the Building or Project, as applicable, to equal Landlord's reasonable estimate of what such Operating Expenses would have been had the Building or Project, as applicable, been ninety-five percent (95%) occupied during such calendar year; provided, however, that Landlord shall not recover more than one hundred percent (100%) of Operating Expenses.

10. Taxes on Tenant's Property.

10.1 Tenant shall be solely responsible for the payment of any and all taxes levied upon (a) personal property and trade fixtures located at the Premises and (b) any gross or net receipts of or sales by Tenant, and shall pay the same prior to delinquency.

10.2 If any such taxes on Tenant's personal property or trade fixtures are levied against Landlord or Landlord's property or, if the assessed valuation of the Building, the Property or the Project is increased by inclusion therein of a value attributable to Tenant's personal property or trade fixtures, and if Landlord, after written notice to Tenant, pays the taxes based upon any such increase in the assessed value of the Building, the Property or the Project, then Tenant shall, upon demand, repay to Landlord the taxes so paid by Landlord; provided that, if Tenant is contesting such levy and such contest is finally determined (beyond all applicable appeal periods) in favor of Tenant, Landlord shall return such amount to Tenant, but only to the extent such amounts are actually received by Landlord from the applicable Governmental Authority.

11. Security Deposit.

11.1 Tenant shall deposit with Landlord on or before the Execution Date the sum set forth in Section 2.6 (the "Security Deposit"), which sum shall be held by Landlord as security for the faithful performance by Tenant of all of the terms, covenants and conditions of this Lease to be kept and performed by Tenant during the period commencing on the Execution Date and ending upon the expiration or termination of Tenant's obligations under this Lease. If Tenant Defaults (as defined below) with respect to any provision of this Lease, including any provision relating to the payment of Rent, then Landlord may (but shall not be required to) use, apply or retain all or any part of the Security Deposit for the payment of any Rent or any other sum in default, or to compensate Landlord for any other loss or damage that Landlord may suffer by reason of Tenant's default. If any portion of the Security Deposit is so used or applied, then Tenant shall, within ten (10) days following demand therefor, deposit cash with Landlord in an amount sufficient to restore the Security Deposit to its original amount, and Tenant's failure to do so shall be a material breach of this Lease. The provisions of this Article shall survive the expiration or earlier termination of this Lease.

11.2 In the event of bankruptcy or other debtor-creditor proceedings against Tenant, the Security Deposit shall be deemed to be applied first to the payment of Rent and other charges due Landlord for all periods prior to the filing of such proceedings.

11.3 Landlord may deliver to any purchaser of Landlord's interest in the Premises the funds deposited hereunder by Tenant, and thereupon Landlord shall be discharged from any further liability with respect to such deposit. This provision shall also apply to any subsequent transfers.

11.4 If Tenant shall fully and faithfully perform every provision of this Lease to be performed by it, then the Security Deposit, or any balance thereof, shall be returned to Tenant (or, at Landlord's option, to the last assignee of Tenant's interest hereunder) within thirty (30) days after the expiration or earlier termination of this Lease.

11.5 If the Security Deposit shall be in cash, Landlord shall hold the Security Deposit in an account at a banking organization selected by Landlord; provided, however, that Landlord shall not be required to maintain a separate account for the Security Deposit, but may intermingle it with other funds of Landlord. Landlord shall be entitled to all interest and/or dividends, if any, accruing on the Security Deposit. Landlord shall not be required to credit Tenant with any interest on the Security Deposit.

11.6 The Security Deposit may be in the form of cash, a letter of credit or any other security instrument acceptable to Landlord in its sole discretion. Tenant may at any time, except when Tenant is in Default (as defined below), deliver a letter of credit (the "L/C Security") as the entire Security Deposit, as follows:

(a) If Tenant elects to deliver L/C Security, then Tenant shall provide Landlord, and maintain in full force and effect throughout the Term and until the date that is four (4) months after the then-current Term Expiration Date (or the date of earlier termination of the Term of this Lease as permitted hereunder), a letter of credit in the form of Exhibit E issued by an issuer reasonably satisfactory to Landlord, in the amount of the Security Deposit, with an initial term of at least one year. Landlord may require the L/C Security to be re-issued by a different issuer at any time during the Term if Landlord reasonably believes that the issuing bank of the L/C Security is or may soon become insolvent; provided, however, Landlord shall return the existing L/C Security to the existing issuer immediately upon receipt of the substitute L/C Security. If any issuer of the L/C Security shall become insolvent or placed into FDIC receivership, then Tenant shall immediately deliver to Landlord (without the requirement of notice from Landlord) substitute L/C Security issued by an issuer reasonably satisfactory to Landlord, and otherwise conforming to the requirements set forth in this Article. As used herein with respect to the issuer of the L/C Security, "insolvent" shall mean the determination of insolvency as made by such issuer's primary bank regulator (*i.e.*, the state bank supervisor for state chartered banks; the OCC or OTS, respectively, for federally chartered banks or thrifts; or the Federal Reserve for its member banks). If, at the Term Expiration Date (or the date of earlier termination of the Term of this Lease as permitted hereunder), any Rent remains uncalculated or unpaid, then (i) Landlord shall with reasonable diligence complete any necessary calculations, (ii) Tenant shall extend the expiry date of such L/C Security from time to time as Landlord reasonably requires and (iii) in such extended period, Landlord shall not unreasonably refuse to consent to an appropriate reduction of the L/C Security. Tenant shall reimburse Landlord's actual legal costs in handling Landlord's acceptance of L/C Security or its replacement or extension.

(b) If Tenant delivers to Landlord satisfactory L/C Security in place of the entire Security Deposit, Landlord shall remit to Tenant any cash Security Deposit Landlord previously held.

(c) Landlord may draw upon the L/C Security, and hold and apply the proceeds in the same manner and for the same purposes as the Security Deposit, if (i) an uncured Default (as defined below) exists, (ii) as of the date forty-five (45) days before any L/C Security expires (even if such scheduled expiry date is after the Term Expiration Date) Tenant has not delivered to Landlord an amendment or replacement for such L/C Security, reasonably satisfactory to Landlord, extending the expiry date to the earlier of (1) four (4) months after the then-current Term Expiration Date or (2) the date one year after the then-current expiry date of the L/C Security, (iii) the L/C Security provides for automatic renewals, Landlord asks the issuer to confirm the current L/C Security expiry date, and the issuer fails to do so within ten (10) business days, (iv) Tenant fails to pay (when and as Landlord reasonably requires) any bank charges for Landlord's transfer of the L/C Security or (v) the issuer of the L/C Security ceases, or announces that it will cease, to maintain an office in the city where Landlord may present drafts under the L/C Security (and fails to permit drawing upon the L/C Security by overnight courier or facsimile). This Section does not limit any other provisions of this Lease allowing Landlord to draw the L/C Security under specified circumstances.

(d) Tenant shall not seek to enjoin, prevent, or otherwise interfere with Landlord's draw under L/C Security, even if it violates this Lease. Tenant acknowledges that the only effect of a wrongful draw would be to substitute a cash Security Deposit for L/C Security, causing Tenant no legally recognizable damage. Landlord shall hold the proceeds of any draw in the same manner and for the same purposes as a cash Security Deposit. In the event of a wrongful draw, the parties shall cooperate to allow Tenant to post replacement L/C Security simultaneously with the return to Tenant of the wrongfully drawn sums, and Landlord shall upon request confirm in writing to the issuer of the L/C Security that Landlord's draw was erroneous.

(e) If Landlord transfers its interest in the Premises, then Tenant shall at Tenant's expense, within five (5) business days after receiving a request from Landlord, deliver (and, if the issuer requires, Landlord shall consent to) an amendment to the L/C Security naming Landlord's grantee as substitute beneficiary. If the required Security Deposit changes while L/C Security is in force, then Tenant shall deliver (and, if the issuer requires, Landlord shall consent to) a corresponding amendment to the L/C Security.

12. Use.

12.1 Tenant shall use the Premises for the Permitted Use, and shall not use the Premises, or permit or suffer the Premises to be used, for any other purpose without Landlord's prior written consent, which consent Landlord may withhold in its sole and absolute discretion.

12.2 Tenant shall not use or occupy the Premises in violation of Applicable Laws; zoning ordinances; or the certificate of occupancy issued for the Building or the Project, and shall, upon five (5) days' written notice from Landlord, discontinue any use of the Premises that is declared or claimed by any Governmental Authority having jurisdiction to be a violation of any of the above, or that in Landlord's reasonable opinion violates any of the above. Tenant shall comply with any direction of any Governmental Authority having jurisdiction that shall, by reason of the nature of Tenant's use or occupancy of the Premises, impose any duty upon Tenant or Landlord with respect to the Premises or with respect to the use or occupation thereof, and shall indemnify, save, defend (at Landlord's option and with counsel reasonably acceptable to Landlord) and hold Landlord and its affiliates, employees, agents and contractors; and any lender, mortgagee, ground lessor or beneficiary (each, a "Lender") and, collectively with Landlord and its affiliates, employees, agents and contractors, the "Landlord Indemnitees") harmless from and against any and all demands, claims, liabilities, losses, costs, expenses, actions causes of action, damages, suits or judgments, and all reasonable expenses (including reasonable attorneys' fees, charges and disbursements, regardless of whether the applicable demand, claim, action, cause of action or suit is voluntarily withdrawn or dismissed) incurred in investigating or resisting the same (collectively "Claims") of any kind or nature that arise before, during or after the Term as a result of Tenant's breach of this Section.

12.3 Tenant shall not do or permit to be done anything that will invalidate or increase the cost of any fire, environmental, extended coverage or any other insurance policy covering the Building or the Project, and shall comply with all rules, orders, regulations and requirements of the insurers of the Building and the Project, and Tenant shall promptly, upon demand, reimburse Landlord for any additional premium charged for such policy by reason of Tenant's failure to comply with the provisions of this Article.

12.4 Tenant shall keep all doors opening onto public corridors closed, except when in use for ingress and egress.

12.5 No additional locks or bolts of any kind shall be placed upon any of the doors or windows by Tenant, nor shall any changes be made to existing locks or the mechanisms thereof without Landlord's prior written consent. Tenant shall, upon termination of this Lease, return to Landlord all keys to offices and restrooms either furnished to or otherwise procured by Tenant. In the event any key so furnished to Tenant is lost, Tenant shall pay to Landlord the cost of replacing the same or of changing the lock or locks opened by such lost key if Landlord shall deem it necessary to make such change.

12.6 No awnings or other projections shall be attached to any outside wall of the Building. No curtains, blinds, shades or screens shall be attached to or hung in, or used in connection with, any window or door of the Premises other than Landlord's standard window coverings. Neither the interior nor exterior of any windows shall be coated or otherwise sunscreened without Landlord's prior written consent (which consent shall not be unreasonably withheld, conditioned or delayed if such treatment is not visible from outside the Premises), nor shall any bottles, parcels or other articles be placed on the windowsills or items attached to windows that are visible from outside the Premises. No equipment, furniture or other items of personal property shall be placed on any exterior balcony without Landlord's prior written consent (which shall not be unreasonably withheld, conditioned or delayed if such items are not visible from the exterior of the Premises).

12.7 No sign, advertisement or notice (“Signage”) shall be exhibited, painted or affixed by Tenant on any part of the Premises or the Building without Landlord’s prior written consent. Signage shall conform to Landlord’s design criteria. For any Signage, Tenant shall, at Tenant’s own cost and expense, (a) acquire all permits for such Signage in compliance with Applicable Laws and (b) design, fabricate, install and maintain such Signage in a first-class condition. Tenant shall be responsible for reimbursing Landlord for costs incurred by Landlord in removing any of Tenant’s Signage upon the expiration or earlier termination of the Lease. Interior signs on entry doors to the Premises shall be inscribed, painted or affixed by Tenant at Tenant’s sole cost and expense, and shall be of a size, color and type and be located in a place acceptable to Landlord, and the directory tablet shall be inscribed or affixed for Tenant by Landlord at Landlord’s sole cost and expense, and shall be of a size, color and type and be located in a place acceptable to Landlord. The directory tablet shall be provided exclusively for the display of the name and location of tenants only. Tenant shall not place anything on the exterior of the corridor walls or corridor doors other than Landlord’s standard lettering. At Landlord’s option, Landlord may install any Tenant Signage, and Tenant shall pay all costs associated with such installation within thirty (30) days after demand therefor. Notwithstanding anything set forth herein to the contrary, all rights of Tenant with respect to Signage on the exterior of the Building shall be personal to Tenant and may not be assigned with this Lease or otherwise.

12.8 Tenant may only place equipment within the Premises with floor loading consistent with the Building’s structural design unless Tenant obtains Landlord’s prior written approval. Tenant may place such equipment only in a location designed to carry the weight of such equipment.

12.9 Tenant shall cause any equipment or machinery to be installed in the Premises so as to reasonably prevent sounds or vibrations therefrom from extending into the Common Area or other offices in the Project.

12.10 Tenant shall not (a) do or permit anything to be done in or about the Premises that shall in any way obstruct or interfere with the rights of other tenants or occupants of the Project, or injure or unreasonably annoy them, (b) use or allow the Premises to be used for immoral, unlawful or objectionable purposes, (c) cause, maintain or permit any nuisance or waste in, on or about the Project or (d) take any other action that would in Landlord’s reasonable determination in any manner adversely affect other tenants’ quiet use and enjoyment of their space or adversely impact their ability to conduct business in a professional and suitable work environment. Notwithstanding anything in this Lease to the contrary, Tenant may not install any security systems (including cameras) outside the Premises or that record sounds or images outside the Premises without Landlord’s prior written consent, which Landlord may withhold in its sole and absolute discretion.

12.11 Notwithstanding any other provision herein to the contrary, Tenant shall be responsible for all liabilities, costs and expenses arising out of or in connection with the compliance of the Premises with the Americans with Disabilities Act, 42 U.S.C. § 12101, et seq., and any state and local accessibility laws, codes, ordinances and rules (collectively, and together with regulations promulgated pursuant thereto, the “ADA”), and Tenant shall indemnify, save, defend (at Landlord’s option and with counsel reasonably acceptable to Landlord) and hold the Landlord Indemnitees harmless from and against Claims arising out of any such failure of the Premises to

comply with the ADA. As of the Execution Date, to Landlord's actual knowledge and without any duty to investigate, Landlord has received no written notice of any ADA violations within the Premises. This Section (as well as any other provisions of this Lease dealing with indemnification of the Landlord Indemnitees by Tenant) shall be deemed to be modified in each case by the insertion in the appropriate place of the following: "except as otherwise provided in Mass. G.L. Ter. Ed., C. 186, Section 15." For the avoidance of doubt, "Lenders" shall also include historic tax credit investors and new market tax credit investors. Landlord represents and warrants that the Premises and the Common Areas shall be in compliance with the ADA as of the Term Commencement Date. The provisions of this Section shall survive the expiration or earlier termination of this Lease.

12.12 Tenant shall maintain temperature and humidity in the Premises in accordance with ASHRAE standards at all times.

12.13 Tenant shall establish and maintain a chemical safety program administered by a licensed, qualified individual in accordance with the requirements of the Massachusetts Water Resources Authority ("MWRA") and any other applicable Governmental Authority. Tenant shall be solely responsible for all costs incurred in connection with such chemical safety program, and Tenant shall provide Landlord with such documentation as Landlord may reasonably require evidencing Tenant's compliance with the requirements of (a) the MWRA and any other applicable Governmental Authority with respect to such chemical safety program and (b) this Section. Notwithstanding the foregoing, Landlord shall obtain and maintain during the Term (m) any permit required by the MWRA ("MWRA Permit") and (n) a wastewater treatment operator license from the Commonwealth of Massachusetts with respect to Tenant's use of the Acid Neutralization Tank (as defined below) in the Building. Tenant shall not introduce anything into the Acid Neutralization Tank (x) in violation of the terms of the MWRA Permit, (y) in violation of Applicable Laws or (z) that would interfere with the proper functioning of the Acid Neutralization Tank. Tenant agrees to reasonably cooperate with Landlord in order to obtain the MWRA Permit and the wastewater treatment operator license. Tenant shall reimburse Landlord within ten (10) business days after demand for any costs incurred by Landlord pursuant to this Section.

13. Rules and Regulations, CC&Rs, Parking Facilities and Common Area.

13.1 Tenant shall have the non-exclusive right, in common with others, to use the Common Area in conjunction with Tenant's use of the Premises for the Permitted Use, and such use of the Common Area and Tenant's use of the Premises shall be subject to the rules and regulations adopted by Landlord and attached hereto as Exhibit G, together with such other reasonable and nondiscriminatory rules and regulations as are hereafter promulgated by Landlord in its sole and absolute discretion (the "Rules and Regulations"). Tenant shall and shall ensure that its contractors, subcontractors, employees, subtenants and invitees faithfully observe and comply with the Rules and Regulations. Landlord shall not be responsible to Tenant for the violation or non-performance by any other tenant or any agent, employee or invitee thereof of any of the Rules and Regulations.

13.2 This Lease is subject to any recorded covenants, conditions or restrictions on the Project or Property, including the Parking and Transportation Demand Management Plan for the Project that was approved on April 28, 1999, and that is attached hereto as Exhibit H with all applicable transfers thereof (the "PTDM"), as the same may be amended, amended and restated, supplemented or otherwise modified from time to time (the "CC&Rs"). Tenant shall comply with the CC&Rs. Tenant acknowledges that Tenant, at its sole cost and expense, shall comply with the tenant requirements in the PTDM, including the requirements set forth in the "Alternative Work Programs," "Alternative Mode Promotions and Incentives," "MBTA Corporate Pass Program and Subsidized Transit Passes," "Ridesharing Vehicles" and "Bicycle and Pedestrian Programs" sections thereof. Tenant, at its sole cost and expense, shall also comply with the reporting requirements set forth in the PTDM at Landlord's request. Any costs incurred by Landlord in connection with the PTDM shall constitute an Operating Expense.

13.3 The Charles River Transportation Management Association (of which Landlord or an affiliate of Landlord is currently a member) provides certain programs to help improve transportation in the Cambridge area. Their website is www.charlesrivertma.org.

13.4 Tenant shall have a non-exclusive, irrevocable license to use Tenant's Pro Rata Share of Building of parking spaces allocated to the Building ("Pro Rata Parking Share"), which parking spaces shall in the Parking Garage in common on an unreserved basis with other tenants of the Project and Neighboring Properties during the Term. Tenant's Pro Rata Parking Share as of the date hereof consists of a total of thirteen (13) parking spaces. The cost of each parking space shall be Two Hundred Fifty Dollars (\$250.00) per month (subject to market rate adjustments by Landlord from time to time throughout the Term), which Tenant shall pay simultaneously with payments of Base Rent as Additional Rent. Tenant, at any time and from time to time during the Term, may elect to waive its right to use some or all or Tenant's Pro Rata Parking Share upon written notice to Landlord. If Tenant so elects, then it shall forfeit for the then-remainder of the Term (including any extension thereof) any and all rights to such waived parking spaces.

13.5 Tenant agrees not to unreasonably overburden the parking facilities and agrees to cooperate with Landlord and other tenants in the use of the parking facilities. Landlord reserves the right to determine that parking facilities are becoming overcrowded and to limit Tenant's use thereof. Upon such determination, Landlord may reasonably allocate parking spaces among Tenant and other tenants of the Building or the Project, provided that Tenant shall be entitled to Tenant's Pro Rata Parking Share provided for in Section 13.4 above. Nothing in this Section, however, is intended to create an affirmative duty on Landlord's part to monitor parking.

13.6 Subject to the terms of this Lease including the Rules and Regulations and the rights of other tenants of the Building, Tenant shall have the non-exclusive right on an unreserved basis to access the freight loading dock twenty-four (24) hours per day, seven (7) days per week, at no additional cost. Landlord shall not be responsible for any coordination of the use of the freight elevator or the loading dock by tenants at the Building. Landlord shall provide a dumpster at the loading dock for Tenant's use for the disposal of non-Hazardous Materials, and Tenant shall pay Tenant's Adjusted Share of the cost of said dumpster. Tenant shall be solely responsible for the disposal of any Hazardous Materials used by any Tenant Party (as hereinafter defined) in accordance with Applicable Laws.

13.7 The land upon which the Parking Garage is situated is subject to that certain Activity and Use Limitation dated February 23, 2001, which was recorded on February 27, 2001 as Instrument No. 785 in Book 32422, Page 393 in the Middlesex South District Registry of Deeds, Commonwealth of Massachusetts and filed as Document No. 1163744 in the Middlesex South District Registry of the Land Court.

14. Project Control by Landlord.

14.1 Landlord reserves full control over the Building and the Project to the extent not inconsistent with Tenant's enjoyment of the Premises as provided by this Lease. This reservation includes Landlord's right to subdivide the Project; convert the Building to condominium units; change the size of the Project by selling all or a portion of the Project or adding real property and any improvements thereon to the Project; grant easements and licenses to third parties; maintain or establish ownership of the Building separate from fee title to the Property; make additions to or reconstruct portions of the Building and the Project; install, use, maintain, repair, replace and relocate for service to the Premises and other parts of the Building or the Project pipes, ducts, conduits, wires and appurtenant fixtures, wherever located in the Premises, the Building or elsewhere at the Project; and alter or relocate any other Common Area or facility, including private drives, lobbies, entrances and landscaping; provided, however, that such rights shall be exercised in a way that does not materially adversely affect Tenant's beneficial use and occupancy of the Premises, including the Permitted Use, Tenant's access to the Premises and Tenant's parking rights. Tenant acknowledges that Landlord specifically reserves the right to allow the exclusive use of corridors and restroom facilities located on specific floors to one or more tenants occupying such floors; provided, however, that Tenant shall not be deprived of the use of the corridors reasonably required to serve the Premises or of restroom facilities serving the floor upon which the Premises are located.

14.2 Possession of areas of the Premises necessary for utilities, services, safety and operation of the Building is reserved to Landlord.

14.3 Tenant shall, at Landlord's request, promptly execute such further documents as may be reasonably appropriate to assist Landlord in the performance of its obligations hereunder; provided that Tenant need not execute any document that creates additional liability for Tenant, changes the size and/or location of the Premises (except as expressly provided in this Section 14 or otherwise herein) or deprives Tenant of the quiet enjoyment and use of the Premises as provided for in this Lease.

14.4 Landlord may, at any and all reasonable times during non-business hours (or during business hours, if (a) with respect to Subsections 14.4(u) through 14.4(y), Tenant so requests, and (b) with respect to Subsection 14.4(z), if Landlord so requests), and upon twenty-four (24) hours' prior notice (which may be oral or by email to the office manager or other Tenant-designated individual at the Premises; but provided that no time restrictions shall apply or advance notice be required if an emergency necessitates immediate entry), enter the Premises to (u) inspect the same and to determine whether Tenant is in compliance with its obligations hereunder, (v) supply any service Landlord is required to provide hereunder, (w) alter, improve or repair any portion of the Building other than the Premises for which access to the Premises is reasonably necessary, (x) post notices of nonresponsibility, (y) access the telephone equipment, electrical substation and fire risers and (z) show the Premises to prospective tenants during the final year of the Term and current and prospective purchasers and lenders at any time. In connection with any such alteration, improvement or repair as described in Subsection 14.4(w), Landlord may erect in the Premises or

elsewhere in the Project scaffolding and other structures reasonably required for the alteration, improvement or repair work to be performed. In no event shall Tenant's Rent abate as a result of Landlord's activities pursuant to this Section; provided, however, that all such activities shall be conducted in such a manner so as to cause as little interference to Tenant as is reasonably possible. Landlord shall at all times retain a key with which to unlock all of the doors in the Premises. If an emergency necessitates immediate access to the Premises, Landlord may use whatever force is necessary to enter the Premises, and any such entry to the Premises shall not constitute a forcible or unlawful entry to the Premises, a detainer of the Premises, or an eviction of Tenant from the Premises or any portion thereof.

15. Quiet Enjoyment. Landlord covenants that Tenant, upon paying the Rent and performing its obligations contained in this Lease, may peacefully and quietly have, hold and enjoy the Premises, free from any claim by Landlord or persons claiming under Landlord, but subject to all of the terms and provisions hereof, provisions of Applicable Laws and rights of record to which this Lease is or may become subordinate. This covenant is in lieu of any other quiet enjoyment covenant, either express or implied.

16. Utilities and Services.

16.1 Tenant shall pay for all water (including the cost to service, repair and replace reverse osmosis, de-ionized and other treated water), gas, heat, light, power, telephone, internet service, cable television, other telecommunications and other utilities supplied to the Premises, together with any fees, surcharges and taxes thereon. Power and HVAC shall be separately submetered to Tenant as part of the Tenant Improvements. If any other utility is not separately metered or sub-metered to Tenant, Tenant shall pay Tenant's Pro Rata Share, or if applicable, Tenant's Adjusted Share of all charges of such utility jointly metered with other premises as Additional Rent or, in the alternative, Landlord may, at its option, monitor the usage of such utilities by Tenant and charge Tenant with the cost of purchasing, installing and monitoring such metering equipment, which cost shall be paid by Tenant as Additional Rent. Landlord may base its bills for utilities on reasonable estimates; provided that Landlord adjusts such billings promptly thereafter or as part of the next Landlord's Statement to reflect the actual cost of providing utilities to the Premises. To the extent that Tenant uses more than Tenant's Pro Rata Share of any utilities, then Tenant shall pay Landlord for Tenant's Adjusted Share of such utilities to reflect such excess. In the event that the Building or Project is less than fully occupied during a calendar year, Tenant acknowledges that Landlord may extrapolate utility usage that varies depending on the occupancy of the Building or Project (as applicable) to equal Landlord's reasonable estimate of what such utility usage would have been had the Building or Project, as applicable, been ninety-five percent (95%) occupied during such calendar year; provided, however, that Landlord shall not recover more than one hundred percent (100%) of the cost of such utilities. Tenant shall not be liable for the cost of utilities supplied to the Premises attributable to the time period prior to the Term Commencement Date; provided, however, that, if Landlord shall permit Tenant possession of the Premises prior to the Term Commencement Date and Tenant uses the Premises for any purpose other than placement of personal property as set forth in Section 4.3, then Tenant shall be responsible for the cost of utilities supplied to the Premises from such earlier date of possession.

16.2 Landlord shall not be liable for, nor shall any eviction of Tenant result from, the failure to furnish any utility or service, whether or not such failure is caused by accidents; breakage; casualties (to the extent not caused by the party claiming Force Majeure); Severe Weather Conditions (as defined below); physical natural disasters (but excluding weather conditions that are not Severe Weather Conditions); strikes, lockouts or other labor disturbances or labor disputes (other than labor disturbances and labor disputes resulting solely from the acts or omissions of the party claiming Force Majeure); acts of terrorism; riots or civil disturbances; wars or insurrections; shortages of materials (which shortages are not unique to the party claiming Force Majeure); government regulations, moratoria or other governmental actions, inactions or delays; failures by third parties to deliver gas, oil or another suitable fuel supply, or inability of the party claiming Force Majeure, by exercise of reasonable diligence, to obtain gas, oil or another suitable fuel; or other causes beyond the reasonable control of the party claiming that Force Majeure has occurred (collectively, "Force Majeure"); or, to the extent permitted by Applicable Laws, Landlord's ordinary negligence (but not, for clarity, gross negligence). In the event of such failure, Tenant shall not be entitled to termination of this Lease or any abatement or reduction of Rent, nor shall Tenant be relieved from the operation of any covenant or agreement of this Lease. "Severe Weather Conditions" means weather conditions that are materially worse than those that reasonably would be anticipated for the Property at the applicable time based on historic meteorological records.

16.3 Tenant shall pay for, prior to delinquency of payment therefor, any utilities and services that may be furnished to the Premises during or, if Tenant occupies the Premises after the expiration or earlier termination of the Term, after the Term, beyond those utilities provided by Landlord, including telephone, internet service, cable television and other telecommunications, together with any fees, surcharges and taxes thereon. Upon Landlord's demand, utilities and services provided to the Premises that are separately metered shall be paid by Tenant directly to the supplier of such utilities or services.

16.4 Tenant shall not, without Landlord's prior written consent, use any device in the Premises (including data processing machines) that will in any way (a) increase the amount of ventilation, air exchange, gas, steam, electricity or water required or consumed in the Premises based upon Tenant's Pro Rata Share of the Building or Project (as applicable) beyond the existing capacity of the Building or the Project usually furnished or supplied for the Permitted Use or (b) exceed Tenant's Pro Rata Share of the Building's or Project's (as applicable) capacity to provide such utilities or services.

16.5 If Tenant shall require utilities or services in excess of those usually furnished or supplied for tenants in similar spaces in the Building or the Project by reason of Tenant's equipment or extended hours of business operations, then Tenant shall first procure Landlord's consent for the use thereof, which consent Landlord may condition upon the availability of such excess utilities or services, and Tenant shall pay as Additional Rent an amount equal to the cost of providing such excess utilities and services.

16.6 Landlord shall provide water in Common Area for lavatory and landscaping purposes only, which water shall be from the local municipal or similar source.

16.7 Landlord reserves the right to stop service of the elevator, plumbing, ventilation, air conditioning and utility systems, when Landlord deems necessary or desirable, due to accident, emergency or the need to make repairs, alterations or improvements, until such repairs, alterations or improvements shall have been completed, and Landlord shall further have no responsibility or liability for failure to supply elevator facilities, plumbing, ventilation, air conditioning or utility service when prevented from doing so by Force Majeure or, to the extent permitted by Applicable Laws, Landlord's ordinary negligence (but not, for clarity, gross negligence). Without limiting the foregoing, it is expressly understood and agreed that any covenants on Landlord's part to furnish any service pursuant to any of the terms, covenants, conditions, provisions or agreements of this Lease, or to perform any act or thing for the benefit of Tenant, shall not be deemed breached if Landlord is unable to furnish or perform the same by virtue of Force Majeure or, to the extent permitted by Applicable Laws, Landlord's ordinary negligence (but not, for clarity, gross negligence).

16.8 Prior to the Term Commencement Date, Landlord will install a back-up generator at the Building (the "Generator"). Landlord shall install an automatic transfer switch connecting the Generator to the Premises as part of the Tenant Improvements. Tenant shall be entitled to use up to Tenant's Pro Rata Share of the Building (after deducting any power from the Generator required for the Common Area and base Building systems) of power from the Generator on a non-exclusive basis with other tenants in the Building. The cost of maintaining, repairing and replacing the Generator shall constitute Operating Expenses. Landlord expressly disclaims any warranties with regard to the Generator or the installation thereof, including any warranty of merchantability or fitness for a particular purpose. Landlord shall maintain the Generator (and any equipment connecting the Generator to Tenant's automatic transfer switch) in good working condition as set forth above; provided, however, that Tenant shall be solely responsible, at Tenant's sole cost and expense, (and Landlord shall not be liable) for maintaining and operating Tenant's automatic transfer switch and the distribution of power from Tenant's automatic transfer switch throughout the Premises, and provided further that Landlord shall not be liable for any failure to make any repairs or to perform any maintenance that is an obligation of Landlord unless such failure shall persist for an unreasonable time after Tenant provides Landlord with written notice of the need for such repairs or maintenance. The provisions of Section 16.2 of this Lease shall apply to the Generator.

16.9 For the Premises, Landlord shall (a) subject to Section 18.1, maintain and operate the HVAC systems used for the Permitted Use only and not for uses other than laboratory use and (b) subject to Section 16.2 and Subsection 16.9(a), furnish HVAC as reasonably required (except as this Lease otherwise provides or as to any special requirements that arise from Tenant's particular use of the Premises) for reasonably comfortable occupancy of the Premises twenty-four (24) hours a day, every day during the Term, subject to casualty, eminent domain or as otherwise specified in this Article. To the extent that Tenant requires HVAC services in excess of those provided by connection to the Building HVAC systems, Tenant shall install and maintain, at its sole cost, (and Landlord shall not be liable for) supplemental HVAC systems in accordance with the provisions of this Lease. Tenant shall pay Landlord, as Additional Rent, Tenant's Adjusted Share of airflow to the Premises. Notwithstanding anything to the contrary in this Section, Landlord shall have no liability, and Tenant shall have no right or remedy, on account of any interruption or impairment in HVAC services; provided that Landlord diligently commences and endeavors to cure any such interruption or impairment.

16.10 For any utilities serving the Premises for which Tenant is billed directly by such utility provider, Tenant agrees to furnish to Landlord (a) any invoices or statements for such utilities within forty five (45) days after Tenant's receipt thereof, (b) within thirty (30) days after Landlord's written request, any other utility usage information reasonably requested by Landlord and within Tenant's possession or control, and (c) within thirty (30) days after each calendar year during the Term, authorization to allow Landlord to access Tenant's usage information necessary for Landlord to complete an ENERGY STAR® Statement of Performance (or similar comprehensive utility usage report (e.g., related to Labs 21), if requested by Landlord) and any other information reasonably requested by Landlord for the immediately preceding year to the extent within Tenant's possession or control; and Tenant shall comply with any other energy usage or consumption requirements required by Applicable Laws. Tenant shall retain records of utility usage at the Premises, including invoices and statements from the utility provider, for at least sixty (60) months, or such other period of time as may be reasonably requested by Landlord. Tenant acknowledges that any utility information for the Premises, the Building and the Project may be shared with third parties, including Landlord's consultants and Governmental Authorities. In the event that Tenant fails to comply with this Section, Tenant hereby authorizes Landlord to collect utility usage information directly from the applicable utility providers for the relevant period, and Tenant shall pay Landlord a fee of Three Hundred Seventy-Five Dollars (\$375) per month to collect such utility usage information. In addition to the foregoing, Tenant shall comply with all Applicable Laws related to the disclosure and tracking of energy consumption at the Premises. The provisions of this Section shall survive the expiration or earlier termination of this Lease.

16.11 The Building is currently serviced by a common laboratory waste sanitary sewer connection from the pH neutralization room in the basement of the Building to the municipal sewer line in the street adjacent to the Building. There currently exists a separate acid neutralization tank (the "Acid Neutralization Tank") in the basement of the Building that will serve the Building. Landlord shall construct a connection from the Acid Neutralization Tank to the Premises as part of the Tenant Improvements. Tenant shall have a non-exclusive right to use up to Tenant's Pro Rata Share of the Building of the Acid Neutralization Tank in accordance with Applicable Laws in common with other tenants of the Building. Tenant, as a portion of its Operating Expenses, shall reimburse Landlord for all costs, charges and expenses incurred by Landlord from time to time in connection with or arising out of the operation, use, maintenance, repair or refurbishment of the Acid Neutralization Tank, including all clean-up costs relating to the Acid Neutralization Tank (collectively, "Tank Costs"); provided, however, that if the Acid Neutralization Tank is being used by any other tenant(s) or occupant(s) of the Building at any time during the Term, then, during such time period, Tenant shall only be obligated to pay its Pro Rata Share of the Building of the Tank Costs. Notwithstanding the foregoing, in the event the Acid Neutralization Tank is damaged or repairs to the Acid Neutralization Tank are required as a result of the improper use of the Acid Neutralization Tank by Tenant, Tenant shall be responsible for one hundred percent (100%) of the cost of any repairs or replacement required as a result of such improper use by Tenant, regardless of whether the Acid Neutralization Tank is then being used by other tenant(s) or occupant(s) of the Building. Similarly, if the Acid Neutralization Tank is damaged, or if repairs to the Acid Neutralization Tank are required as a result of the improper use of the Acid Neutralization Tank by other tenant(s) or occupant(s) of the Building, then Tenant shall have no responsibility for the cost of any repairs or replacements required as a result of such improper use by such other tenant(s) or occupant(s). Tenant shall indemnify, save, defend (at Landlord's option and with counsel reasonably acceptable to Landlord) and hold the Landlord Indemnitees harmless from and against

any and all Claims, including (a) diminution in value of the Project or any portion thereof, (b) damages for the loss or restriction on use of rentable or usable space or of any amenity of the Project, (c) damages arising from any adverse impact on marketing of space in the Project or any portion thereof and (d) sums paid in settlement of Claims that arise during or after the Term as a result of Tenant's improper use of the Acid Neutralization Tank. This indemnification by Tenant includes costs incurred in connection with any investigation of site conditions or any clean-up, remediation, removal or restoration required by any Governmental Authority caused by Tenant's improper use of the Acid Neutralization Tank.

17. Alterations.

17.1 Tenant shall make no alterations, additions or improvements in or to the Premises or engage in any construction, demolition, reconstruction, renovation or other work (whether major or minor) of any kind in, at or serving the Premises ("Alterations") without Landlord's prior written approval, which approval Landlord shall not unreasonably withhold; provided, however, that, in the event any proposed Alteration affects (a) any structural portions of the Building, including exterior walls, the roof, the foundation or slab, foundation or slab systems (including barriers and subslab systems) or the core of the Building, (b) the exterior of the Building or (c) any Building systems, including elevator, plumbing, HVAC, electrical, security, life safety and power, then Landlord may withhold its approval in its sole and absolute discretion (for the avoidance of doubt, the installation of any equipment by Tenant that is personal property, that is not built into or attached to the Premises and that does not require any construction, demolition, reconstruction, renovation or other work shall not constitute an Alteration for the purposes hereof). Tenant shall, in making any Alterations, use only those architects, contractors, suppliers and mechanics of which Landlord has given prior written approval, which approval shall be in Landlord's sole and absolute discretion. In seeking Landlord's approval, Tenant shall provide Landlord, at least thirty (30) days in advance of any proposed construction, with plans, specifications, bid proposals, certified stamped engineering drawings and calculations by Tenant's engineer of record or architect of record (including connections to the Building's structural system, modifications to the Building's envelope, non-structural penetrations in slabs or walls, and modifications or tie-ins to life safety systems), work contracts, requests for laydown areas and such other information concerning the nature and cost of the Alterations as Landlord may reasonably request. In no event shall Tenant use or Landlord be required to approve any architects, consultants, contractors, subcontractors or material suppliers that Landlord reasonably believes could cause labor disharmony or may not have sufficient experience, in Landlord's reasonable opinion, to perform work in an occupied Class "A" laboratory research building and in tenant-occupied lab areas. Notwithstanding the foregoing, Tenant may make strictly cosmetic changes to the Premises that do not require any permits or more than three (3) total contractors and subcontractors ("Cosmetic Alterations") without Landlord's consent; provided that (y) the cost of any Cosmetic Alterations does not exceed Thirty Thousand Dollars (\$30,000.00) in any one instance or Ninety Thousand Dollars (\$90,000.00) annually, (z) such Cosmetic Alterations do not (i) require any structural or other substantial modifications to the Premises, (ii) require any changes to or adversely affect the Building systems, (iii) affect the exterior of the Building or (iv) trigger any requirement under Applicable Laws that would require Landlord to make any alteration or improvement to the Premises, the Building or the Project. Tenant shall give Landlord at least ten (10) days' prior written notice of any Cosmetic Alterations.

17.2 Tenant shall not construct or permit to be constructed partitions or other obstructions that might interfere with free access to mechanical installation or service facilities of the Building or with other tenants' components located within the Building, or interfere with the moving of Landlord's equipment to or from the enclosures containing such installations or facilities.

17.3 Tenant shall accomplish any work performed on the Premises or the Building in such a manner as to permit any life safety systems to remain fully operable at all times.

17.4 Any work performed on the Premises, the Building or the Project by Tenant or Tenant's contractors shall be done at such times and in such manner as Landlord may from time to time designate. Tenant covenants and agrees that all work done by Tenant or Tenant's contractors shall be performed in full compliance with Applicable Laws. Within thirty (30) days after completion of any Alterations, Tenant shall provide Landlord with complete "as built" drawing print sets and electronic CADD files on disc (or files in such other current format in common use as Landlord reasonably approves or requires) showing any changes in the Premises, as well as a commissioning report prepared by a licensed, qualified commissioning agent hired by Tenant and approved by Landlord for all new or affected mechanical, electrical and plumbing systems. Any such "as built" plans shall show the applicable Alterations as an overlay on the Building as-built plans; provided that Landlord provides the Building "as built" plans to Tenant.

17.5 Before commencing any Alterations, Tenant shall give Landlord at least thirty (30) days' prior written notice of the proposed commencement of such work and shall, if required by Landlord, secure, at Tenant's own cost and expense, a completion and lien indemnity bond satisfactory to Landlord for such work.

17.6 Tenant shall repair any damage to the Premises caused by Tenant's removal of any property from the Premises. During any such restoration period, Tenant shall pay Rent to Landlord as provided herein as if such space were otherwise occupied by Tenant. The provisions of this Section shall survive the expiration or earlier termination of this Lease.

17.7 The Premises plus any Alterations, Signage, Tenant Improvements, attached equipment, decorations, fixtures, movable laboratory casework and related appliances, trade fixtures, and other additions and improvements attached to or built into the Premises made by either of the parties (including all floor and wall coverings; paneling; sinks and related plumbing fixtures; laboratory benches; exterior venting fume hoods; walk-in freezers and refrigerators; ductwork; conduits; electrical panels and circuits; business and trade fixtures; attached machinery and equipment; and built-in furniture and cabinets, in each case, together with all additions and accessories thereto), shall (unless, prior to such construction or installation, Landlord elects otherwise in writing) at all times remain the property of Landlord, shall remain in the Premises and shall (unless, prior to construction or installation thereof, Landlord elects otherwise in writing) be surrendered to Landlord upon the expiration or earlier termination of this Lease. For the avoidance of doubt, the items listed on Exhibit I attached hereto (which Exhibit I may be updated by Tenant from and after the Term Commencement Date, subject to Landlord's written consent which shall not be unreasonably withheld, conditioned or delayed) constitute Tenant's property and shall be removed by Tenant upon the expiration or earlier termination of the Lease.

17.8 Notwithstanding any other provision of this Article to the contrary, in no event shall Tenant remove any improvement from the Premises as to which Landlord contributed payment, including the Tenant Improvements, without Landlord's prior written consent, which consent Landlord may withhold in its sole and absolute discretion.

17.9 If Tenant shall fail to remove any of its property from the Premises prior to the expiration or earlier termination of this Lease, then Landlord may, at its option, remove the same in any manner that Landlord shall choose and store such effects without liability to Tenant for loss thereof or damage thereto, and Tenant shall pay Landlord, upon demand, any costs and expenses incurred due to such removal and storage or Landlord may, at its sole option and without notice to Tenant, sell such property or any portion thereof at private sale and without legal process for such price as Landlord may obtain and apply the proceeds of such sale against any (a) amounts due by Tenant to Landlord under this Lease and (b) any expenses incident to the removal, storage and sale of such personal property.

17.10 Tenant shall pay to Landlord an amount equal to three percent (3%) of the cost to Tenant of all Alterations (but excluding the costs of Cosmetic Alterations) to cover Landlord's overhead and expenses for plan review, engineering review, coordination, scheduling and supervision thereof. For purposes of payment of such sum, Tenant shall submit to Landlord copies of all bills, invoices and statements covering the costs of such charges, accompanied by payment to Landlord of the fee set forth in this Section. Tenant shall reimburse Landlord for any extra expenses incurred by Landlord by reason of faulty work done by Tenant or its contractors, or by reason of delays caused by such work, or by reason of inadequate clean-up.

17.11 Within sixty (60) days after final completion of any Alterations performed by Tenant with respect to the Premises, Tenant shall submit to Landlord documentation showing the amounts expended by Tenant with respect to such Alterations, together with supporting documentation reasonably acceptable to Landlord.

17.12 Tenant shall take, and shall cause its contractors to take, commercially reasonable steps to protect the Premises during the performance of any Alterations, including covering or temporarily removing any window coverings so as to guard against dust, debris or damage.

17.13 Tenant shall require its contractors and subcontractors performing work on the Premises to name Landlord and its affiliates and Lenders as additional insureds on their respective insurance policies.

17.14 Notwithstanding anything to the contrary in this Lease, Landlord and Tenant agree that Landlord shall be permitted to withhold its approval (in its sole and absolute discretion) of any Alteration that (a) is inconsistent with the office and lab zones identified on Exhibit D attached hereto, or (b) affects the use or function of any flexible wall and lab bench system within the Premises.

18. Repairs and Maintenance.

18.1 Subject to the limitations set forth in Section 16.9, Landlord shall repair and maintain the structural and exterior portions and Common Area of the Building and the Project, including roofing and covering materials; foundations (excluding any architectural slabs, but including any structural slabs); exterior walls; plumbing; fire sprinkler and life safety systems (if any); base Building HVAC systems up to the first damper or isolation valve that serves the Premises (for purposes of clarity, the portion of the HVAC system that includes such first damper or isolation valve and extends into and through the Premises, and any supplemental HVAC serving the Premises, shall not be part of the base Building HVAC and shall be Tenant's obligation to maintain and repair pursuant to Section 18.2 below); the Acid Neutralization Tank and associated monitoring system; elevators; and base Building electrical systems.

18.2 Except for services of Landlord, if any, required by Section 18.1, Tenant shall at Tenant's sole cost and expense maintain and keep the Premises (including but not limited to the portion of the HVAC system that includes such first damper or isolation valve and extends into and through the Premises and any supplemental HVAC serving the Premises, including but not limited to any supplemental HVAC serving Tenant's vivarium), and every part thereof in good condition and repair, damage thereto from ordinary wear and tear excepted, and shall, within ten (10) business days after receipt of written notice from Landlord, provide to Landlord any maintenance records that Landlord reasonably requests to the extent within Tenant's possession or control or otherwise reasonably attainable by Tenant (during the Term, Tenant shall use diligent and good faith efforts to ensure that all such records are within Tenant's possession or control or otherwise reasonably attainable by Tenant). Tenant shall, upon the expiration or sooner termination of the Term, surrender the Premises to Landlord in as good a condition as existed when the Tenant Improvements are finally completed by Landlord, ordinary wear and tear excepted, and with respect to Alterations, in substantially the same condition as existed on the date such Alterations are substantially completed by Tenant, ordinary wear and tear excepted; and Tenant shall, at Landlord's request and Tenant's sole cost and expense, remove all telephone and data systems, wiring and equipment from the Premises, and repair any damage to the Premises caused thereby. Landlord shall have no obligation to alter, remodel, improve, repair, decorate or paint the Premises or any part thereof, other than pursuant to the terms and provisions of the Work Letter or Section 4.1.

18.3 Landlord shall not be liable for any failure to make any repairs or to perform any maintenance that is Landlord's obligation pursuant to this Lease unless such failure shall persist for an unreasonable time after Tenant provides Landlord with written notice of the need of such repairs or maintenance and Landlord is not diligently pursuing such repair(s). Tenant waives its rights under Applicable Laws now or hereafter in effect to make repairs at Landlord's expense.

18.4 If any excavation shall be made upon land adjacent to or under the Building, or shall be authorized to be made, Tenant shall afford, upon forty-eight (48) hours' prior notice to Tenant (other than in the event of an emergency, when no prior notice shall be required), to the person causing or authorized to cause such excavation, license to enter the Premises for the purpose of performing such work as such person shall deem necessary or desirable to preserve and protect the Building from injury or damage and to support the same by proper foundations, without any claim for damages or liability against Landlord and without reducing or otherwise affecting Tenant's obligations under this Lease.

18.5 This Article relates to repairs and maintenance arising in the ordinary course of operation of the Building and the Project. In the event of a casualty described in Article 24, Article 24 shall apply in lieu of this Article. In the event of eminent domain, Article 25 shall apply in lieu of this Article.

18.6 Costs incurred by Landlord pursuant to this Article shall constitute Operating Expenses.

19. Liens.

19.1 Subject to the immediately succeeding sentence, Tenant shall keep the Premises, the Building and the Project free from any liens arising out of work or services performed, materials furnished to or obligations incurred by Tenant. Tenant further covenants and agrees that any mechanic's or materialman's lien filed against the Premises, the Building or the Project for work or services claimed to have been done for, or materials claimed to have been furnished to, or obligations incurred by Tenant shall be discharged or bonded by Tenant within ten (10) days after the filing thereof, at Tenant's sole cost and expense. Notwithstanding the foregoing, Tenant shall not be responsible for mechanic's or materialman's liens in connection with any Landlord Work or Tenant Improvements performed by Landlord in accordance with a contract executed by Landlord.

19.2 Should Tenant fail to discharge or bond against any lien of the nature described in Section 19.1, Landlord may, at Landlord's election, pay such claim or post a statutory lien bond or otherwise provide security to eliminate the lien as a claim against title, and Tenant shall immediately reimburse Landlord for the costs thereof as Additional Rent. Tenant shall indemnify, save, defend (at Landlord's option and with counsel reasonably acceptable to Landlord) and hold the Landlord Indemnitees harmless from and against any Claims arising from any such liens, including any administrative, court or other legal proceedings related to such liens.

19.3 In the event that Tenant leases or finances the acquisition of office equipment, furnishings or other personal property of a removable nature utilized by Tenant in the operation of Tenant's business, Tenant warrants that any Uniform Commercial Code financing statement shall, upon its face or by exhibit thereto, indicate that such financing statement is applicable only to removable personal property of Tenant located within the Premises. In no event shall the address of the Premises, the Building or the Project be furnished on a financing statement without qualifying language as to applicability of the lien only to removable personal property located in an identified suite leased by Tenant. Should any holder of a financing statement record or place of record a financing statement that appears to constitute a lien against any interest of Landlord or against equipment that may be located other than within an identified suite leased by Tenant, Tenant shall, within ten (10) days after filing such financing statement, cause (a) a copy of the lender security agreement or other documents to which the financing statement pertains to be furnished to Landlord to facilitate Landlord's ability to demonstrate that the lien of such financing statement is not applicable to Landlord's interest and (b) Tenant's lender to amend such financing statement and any other documents of record to clarify that any liens imposed thereby are not applicable to any interest of Landlord in the Premises, the Building or the Project.

20. Estoppel Certificate. Tenant shall, within ten (10) days after receipt of written notice from Landlord, execute, acknowledge and deliver a statement in writing substantially in the form attached to this Lease as Exhibit J, or on any other form reasonably requested by a current or proposed Lender or encumbrancer or proposed purchaser, (a) certifying that this Lease is unmodified and in full force and effect (or, if modified, stating the nature of such modification and certifying that this Lease as so modified is in full force and effect) and the dates to which rental and other charges are paid in advance, if any, (b) acknowledging that there are not, to Tenant's knowledge, any uncured defaults on the part of Landlord hereunder, or specifying such defaults if any are claimed, and (c) setting forth such further information with respect to this Lease or the Premises as may be requested thereon. Any such statements may be relied upon by any prospective purchaser or encumbrancer of all or any portion of the Property. Tenant's failure to deliver any such statement within such prescribed time if such failure continues for more than five (5) calendar days after Landlord gives Tenant written notice thereof shall, at Landlord's option, constitute a Default (as defined below) under this Lease, and, in any event, shall be binding upon Tenant that the Lease is in full force and effect and without modification except as may be represented by Landlord in any certificate prepared by Landlord and delivered to Tenant for execution.

21. Hazardous Materials.

21.1 Tenant shall not cause or permit any Hazardous Materials (as defined below) to be brought upon, kept or used in or about the Premises, the Building or the Project in violation of Applicable Laws by Tenant or any of its employees, agents, contractors or invitees (collectively with Tenant, each a "Tenant Party"). If (a) Tenant breaches such obligation, (b) the presence of Hazardous Materials as a result of such a breach results in contamination of the Project, any portion thereof, or any adjacent property, (c) contamination of the Premises otherwise occurs during the Term or any extension or renewal hereof or holding over hereunder or (d) contamination of the Project occurs as a result of Hazardous Materials that are placed on or under or are released into the Project by a Tenant Party, then Tenant shall indemnify, save, defend (at Landlord's option and with counsel reasonably acceptable to Landlord) and hold the Landlord Indemnitees harmless from and against any and all Claims of any kind or nature, including (w) diminution in value of the Project or any portion thereof, (x) damages for the loss or restriction on use of rentable or usable space or of any amenity of the Project, (y) damages arising from any adverse impact on marketing of space in the Project or any portion thereof and (z) sums paid in settlement of Claims that arise before, during or after the Term as a result of such breach or contamination. This indemnification by Tenant includes costs incurred in connection with any investigation of site conditions or any clean-up, remedial, removal or restoration work required by any Governmental Authority because of Hazardous Materials present in the air, soil or groundwater above, on, under or about the Project. Without limiting the foregoing, if the presence of any Hazardous Materials in, on, under or about the Project, any portion thereof or any adjacent property caused or permitted by any Tenant Party results in any contamination of the Project, any portion thereof or any adjacent property, then Tenant shall promptly take all actions at its sole cost and expense as are necessary to return the Project, any portion thereof or any adjacent property to its respective condition existing prior to the time of such contamination; provided that Landlord's written approval of such action shall first be obtained, which approval Landlord shall not unreasonably withhold; and provided, further, that it shall be reasonable for Landlord to withhold its consent if such actions could have a material adverse long-term or short-term effect on the Project, any portion thereof or any adjacent property. Tenant's obligations under this Section shall not be affected, reduced or limited by any limitation on the amount or type of damages, compensation or benefits payable by or for Tenant under workers' compensation acts, disability benefit acts, employee benefit acts or similar legislation.

21.2 Landlord acknowledges that it is not the intent of this Article to prohibit Tenant from operating its business for the Permitted Use. Tenant may operate its business according to the custom of Tenant's industry so long as the use or presence of Hazardous Materials is strictly and properly monitored in accordance with Applicable Laws. As a material inducement to Landlord to allow Tenant to use Hazardous Materials in connection with its business, Tenant agrees to deliver to Landlord (a) a list identifying each type of Hazardous Material to be present at the Premises that is subject to regulation under any environmental Applicable Laws, (b) a list of any and all approvals or permits from Governmental Authorities required in connection with the presence of such Hazardous Material at the Premises and (c) correct and complete copies of (i) notices of violations of Applicable Laws related to Hazardous Materials and (ii) plans relating to the installation of any storage tanks to be installed in, on, under or about the Project (provided that installation of storage tanks shall only be permitted after Landlord has given Tenant its written consent to do so, which consent Landlord may withhold in its sole and absolute discretion) and closure plans or any other documents required by any and all Governmental Authorities for any storage tanks installed in, on, under or about the Project for the closure of any such storage tanks (collectively, "Hazardous Materials Documents"). Tenant shall deliver to Landlord updated Hazardous Materials Documents, within fourteen (14) days after receipt of a written request therefor from Landlord, not more often than once per year, unless (m) there are any changes to the Hazardous Materials Documents or (n) Tenant initiates any Alterations or changes its business, in either case in a way that involves any material increase in the types or amounts of Hazardous Materials. For each type of Hazardous Material listed, the Hazardous Materials Documents shall include (t) the chemical name, (u) the material state (e.g., solid, liquid, gas or cryogen), (v) the concentration, (w) the storage amount and storage condition (e.g., in cabinets or not in cabinets), (x) the use amount and use condition (e.g., open use or closed use), (y) the location (e.g., room number or other identification) and (z) if known, the chemical abstract service number. Notwithstanding anything in this Section to the contrary, Tenant shall not be required to provide Landlord with any Hazardous Materials Documents containing information of a proprietary nature, which Hazardous Materials Documents, in and of themselves, do not contain a reference to any Hazardous Materials or activities related to Hazardous Materials. Landlord may, at Landlord's expense, cause the Hazardous Materials Documents to be reviewed by a person or firm qualified to analyze Hazardous Materials to confirm compliance with the provisions of this Lease and with Applicable Laws. In the event that a review of the Hazardous Materials Documents indicates non-compliance with this Lease or Applicable Laws, Tenant shall, at its expense, diligently take steps to bring its storage and use of Hazardous Materials into compliance. Notwithstanding anything in this Lease to the contrary or Landlord's review into Tenant's Hazardous Materials Documents or use or disposal of hazardous materials, however, Landlord shall not have and expressly disclaims any liability related to Tenant's or other tenants' use or disposal of Hazardous Materials, it being acknowledged by Tenant that Tenant is best suited to evaluate the safety and efficacy of its Hazardous Materials usage and procedures.

21.3 Tenant represents and warrants to Landlord that it is not nor has it been, in connection with the use, disposal or storage of Hazardous Materials, (a) subject to a material enforcement order issued by any Governmental Authority or (b) required to take any remedial action.

21.4 At any time, and from time to time, prior to the expiration of the Term, Landlord shall have the right to conduct appropriate tests of the Project or any portion thereof to demonstrate that Hazardous Materials are present or that contamination has occurred due to the acts or omissions of a Tenant Party. Tenant shall pay all reasonable costs of such tests if such tests reveal that Hazardous Materials (for which any Tenant Party is responsible under this Lease) exist at the Project in violation of this Lease.

21.5 If underground or other storage tanks storing Hazardous Materials installed or utilized by Tenant are located on the Premises, or are hereafter placed on the Premises by Tenant (or by any other party, if such storage tanks are utilized by Tenant), then Tenant shall monitor the storage tanks, maintain appropriate records, implement reporting procedures, properly close any underground storage tanks, and take or cause to be taken all other steps necessary or required under the Applicable Laws. Tenant shall have no responsibility or liability for underground or other storage tanks installed by anyone other than Tenant unless Tenant utilizes such tanks, in which case Tenant's responsibility for such tanks shall be as set forth in this Section.

21.6 Tenant shall promptly report to Landlord any actual or suspected presence of mold or water intrusion at the Premises.

21.7 Tenant's obligations under this Article shall survive the expiration or earlier termination of the Lease. During any period of time needed by Tenant or Landlord after the termination of this Lease to complete the removal from the Premises of any such Hazardous Materials, Tenant shall be deemed a holdover tenant and subject to the provisions of Article 27.

21.8 As used herein, the term "Hazardous Material" means any toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic or otherwise hazardous substance, material or waste that is or becomes regulated by Applicable Laws or any Governmental Authority.

21.9 Notwithstanding anything to the contrary in this Lease, Landlord shall have sole control over the equitable allocation of fire control areas (as defined in the Uniform Building Code as adopted by the city or municipality(ies) in which the Project is located (the "UBC")). The UBC definition of fire control areas also sets forth the maximum quantity and type of Hazardous Materials permitted to be stored within a fire control area. Landlord and Tenant acknowledge that as of the Term Commencement Date, there will be the following two (2) separate fire control areas in the Building to be used by all tenants of the Building: (a) a waste storage room located adjacent to the loading dock, as shown on Exhibit A attached hereto (the "Waste Storage Room"), and (b) the remainder of the Building exclusive of the waste storage room (the "Building Control Area"). Tenant shall have the right to use its Pro Rata Share of the area in the Waste Storage Room to store up to Tenant's Pro Rata Share of the quantity of Hazardous Materials permitted within one fire control area. Tenant shall also have the right to store in the Premises (exclusive of the area comprised of Tenant's Pro Rata Share of the Waste Storage Room), up to its Pro Rata Share of the

quantity of Hazardous Materials allowed within the Building Control Area. The Building Control Area shall constitute a separate and distinct fire control area from the Waste Storage Area, and the Tenant's Pro Rata Share of the quantity of Hazardous Materials permitted in one fire control area shall not be aggregated with the Tenant's Pro Rata Share of the quantity of Hazardous Materials permitted in the other fire control area. Notwithstanding anything to the contrary in this Lease, the quantity of Hazardous Materials allowed by this Section 21.9 is specific to Tenant and shall not run with the Lease in the event of a Transfer (as defined in Article 29). In the event of a Transfer, if the use of Hazardous Materials by such new tenant ("New Tenant") is such that New Tenant utilizes fire control areas in the Project in excess of New Tenant's Pro Rata Share of the Building or the Project, as applicable, then New Tenant shall, at its sole cost and expense and upon Landlord's written request, establish and maintain a separate area of the Premises classified by the UBC as an "H" occupancy area for the use and storage of Hazardous Materials, or take such other action as is necessary to ensure that its share of the fire control areas of the Building and the Project is not greater than New Tenant's Pro Rata Share of the Building or the Project, as applicable. Notwithstanding anything in this Lease to the contrary, Landlord shall not have and expressly disclaims any liability related to Tenant's or other tenants' use or disposal of fire control areas, it being acknowledged by Tenant that Tenant and other tenants are best suited to evaluate the safety and efficacy of its Hazardous Materials usage and procedures.

22. Odors and Exhaust. Tenant acknowledges that Landlord would not enter into this Lease with Tenant unless Tenant assured Landlord that under no circumstances will any other occupants of the Building or the Project (including persons legally present in any outdoor areas of the Project) be subjected to odors or fumes (whether or not noxious), and that the Building and the Project will not be damaged by any exhaust, in each case from Tenant's operations. Landlord and Tenant therefore agree as follows:

22.1 Tenant shall not cause or permit (or conduct any activities that would cause) any release of any odors or fumes of any kind from the Premises.

22.2 If the Building has a ventilation system that, in Landlord's judgment, is adequate, suitable, and appropriate to vent the Premises in a manner that does not release odors affecting any indoor or outdoor part of the Project, Tenant may vent the Premises through such system. If Landlord at any time determines that any existing ventilation system is inadequate, or if no ventilation system exists, Tenant shall, after receiving written notice from Landlord, in compliance with Applicable Laws vent all fumes and odors from the Premises (and remove odors from Tenant's exhaust stream) as Landlord reasonably requires. The placement and configuration of all ventilation exhaust pipes, louvers and other equipment shall be subject to Landlord's reasonable approval. Tenant acknowledges Landlord's legitimate desire to maintain the Project (indoor and outdoor areas) in an odor-free manner, and Landlord may require Tenant to abate and remove all odors in a manner that goes beyond the requirements of Applicable Laws.

22.3 Tenant shall, at Tenant's sole cost and expense, provide odor eliminators and other devices (such as filters, air cleaners, scrubbers and whatever other equipment may in Landlord's judgment be necessary or appropriate from time to time) to completely remove, eliminate and abate any odors, fumes or other substances in Tenant's exhaust stream that, in Landlord's judgment, emanate from Tenant's Premises. Any work Tenant performs under this Section shall constitute Alterations.

22.4 Tenant's responsibility to remove, eliminate and abate odors, fumes and exhaust shall continue throughout the Term. Landlord's construction of the Tenant Improvements shall not preclude Landlord from requiring additional measures to eliminate odors, fumes and other adverse impacts of Tenant's exhaust stream (as Landlord may designate in Landlord's discretion). Tenant shall install additional equipment as Landlord requires from time to time under the preceding sentence. Such installations shall constitute Alterations.

22.5 If Tenant fails to install satisfactory odor control equipment within ten (10) business days after Landlord's demand made at any time, then Landlord may, without limiting Landlord's other rights and remedies, require Tenant to cease and suspend any operations in the Premises that, in Landlord's determination, cause odors, fumes or exhaust; provided however, that if the nature of such installation is such that it reasonably requires more than ten (10) business days to complete, the timeframe for Tenant's installation shall be extended so long as Tenant commences such installation within such ten (10) business day period and thereafter diligently prosecutes the same to completion within sixty (60) days. For example, if Landlord determines that Tenant's production of a certain type of product causes odors, fumes or exhaust, and Tenant does not install satisfactory odor control equipment within ten (10) business days after Landlord's request (subject to extension as provided above), then Landlord may require Tenant to stop producing such type of product in the Premises unless and until Tenant has installed odor control equipment satisfactory to Landlord.

23. Insurance; Waiver of Subrogation.

23.1 Landlord shall maintain insurance for the Building and the Project in amounts equal to full replacement cost (exclusive of the costs of excavation, foundations and footings, engineering costs or such other costs to the extent the same are not incurred in the event of a rebuild and without reference to depreciation taken by Landlord upon its books or tax returns) or such lesser coverage as Landlord may elect, provided that such coverage shall not be less than the amount of such insurance Landlord's Lender, if any, requires Landlord to maintain, providing protection against any peril generally included within the classification "Fire and Extended Coverage," together with insurance against sprinkler damage (if applicable), vandalism and malicious mischief. Landlord, subject to availability thereof, shall further insure, if Landlord deems it appropriate, coverage against flood, environmental hazard, earthquake, loss or failure of building equipment, rental loss during the period of repairs or rebuilding, Workers' Compensation insurance and fidelity bonds for employees employed to perform services. Notwithstanding the foregoing, Landlord may, but shall not be deemed required to, provide insurance for any improvements installed by Tenant or that are in addition to the standard improvements customarily furnished by Landlord, without regard to whether or not such are made a part of or are affixed to the Building.

23.2 In addition, Landlord shall carry Commercial General Liability insurance with limits of not less than One Million Dollars (\$1,000,000) per occurrence/general aggregate for bodily injury (including death), or property damage with respect to the Project.

23.3 Tenant shall, at its own cost and expense, procure and maintain during the Term the following insurance for the benefit of Tenant and Landlord (as their interests may appear) with insurers financially acceptable and lawfully authorized to do business in the state where the Premises are located:

(a) Commercial General Liability insurance on a broad-based occurrence coverage form, with coverages including but not limited to bodily injury (including death), property damage (including loss of use resulting therefrom), premises/operations, personal & advertising injury, and contractual liability with limits of liability of not less than \$2,000,000 for bodily injury and property damage per occurrence, \$2,000,000 general aggregate, which limits may be met by use of excess and/or umbrella liability insurance provided that such coverage is at least as broad as the primary coverages required herein.

(b) Commercial Automobile Liability insurance covering liability arising from the use or operation of any auto, including those owned, hired or otherwise operated or used by or on behalf of the Tenant. The coverage shall be on a broad-based occurrence form with combined single limits of not less than \$1,000,000 per accident for bodily injury and property damage.

(c) Commercial Property insurance covering property damage to the full replacement cost value and business interruption. Covered property shall include all tenant improvements in the Premises (to the extent not insured by Landlord pursuant to Section 23.1) and Tenant's Property including personal property, furniture, fixtures, machinery, equipment, stock, inventory and improvements and betterments, which may be owned by Tenant or Landlord and required to be insured hereunder, or which may be leased, rented, borrowed or in the care custody or control of Tenant, or Tenant's agents, employees or subcontractors. Such insurance, with respect only to all Alterations or other work performed on the Premises by Tenant (collectively, "Tenant Work"), shall name Landlord and Landlord's current and future mortgagees as loss payees as their interests may appear. Such insurance shall be written on an "all risk" of physical loss or damage basis including the perils of fire, extended coverage, electrical injury, mechanical breakdown, windstorm, vandalism, malicious mischief, sprinkler leakage, back-up of sewers or drains, earthquake, terrorism and such other risks Landlord may from time to time designate, for the full replacement cost value of the covered items with an agreed amount endorsement with no co-insurance. Business interruption coverage shall have limits sufficient to cover Tenant's lost profits and necessary continuing expenses, including rents due Landlord under the Lease. The minimum period of indemnity for business interruption coverage shall be twelve (12) months plus twelve (12) months' extended period of indemnity.

(d) Workers' Compensation insurance as is required by statute or law, or as may be available on a voluntary basis and Employers' Liability insurance with limits of not less than the following: each accident, Five Hundred Thousand Dollars (\$500,000); disease (\$500,000); disease (each employee), Five Hundred Thousand Dollars (\$500,000).

(e) Medical malpractice insurance at limits of not less than \$1,000,000 each claim during such periods, if any, that Tenant engages in the practice of medicine at the Premises.

(f) Intentionally omitted.

(g) During all construction by Tenant at the Premises, with respect to tenant improvements being constructed (including any Alterations, insurance required in Exhibit B-1 must be in place.

The insurance required of Tenant by this Article shall be with companies at all times having a current rating of not less than A- and financial category rating of at least Class VII in "A.M. Best's Insurance Guide" current edition. Tenant shall obtain for Landlord from the insurance companies/broker or cause the insurance companies/broker to furnish certificates of insurance evidencing all coverages required herein to Landlord. Landlord reserves the right to require complete, certified copies of all required insurance policies including any endorsements. No such policy shall be cancelable or subject to reduction of coverage or other modification or cancellation except after twenty (20) days' prior written notice to Landlord from Tenant or its insurers (except in the event of non-payment of premium, in which case ten (10) days' written notice shall be given). All such policies shall be written as primary policies, not contributing with and not in excess of the coverage that Landlord may carry. Tenant's required policies shall contain severability of interests clauses stating that, except with respect to limits of insurance, coverage shall apply separately to each insured or additional insured. Tenant shall, at least twenty-five (25) days prior to the expiration of such policies, furnish Landlord with renewal certificates of insurance or binders. Tenant agrees that if Tenant does not take out and maintain such insurance, Landlord may (but shall not be required to) procure such insurance on Tenant's behalf and at its cost to be paid by Tenant as Additional Rent. Commercial General Liability, Commercial Automobile Liability, and Umbrella Liability as required above shall name Landlord, BioMed Realty, L.P., and BioMed Realty Trust, Inc., and their respective officers, employees, agents, general partners, members, subsidiaries, affiliates and Lenders ("Landlord Parties") as additional insureds as respects liability arising from work or operations performed by or on behalf of Tenant, Tenant's use or occupancy of Premises, and ownership, maintenance or use of vehicles by or on behalf of Tenant.

23.4 In each instance where insurance is to name Landlord Parties as additional insureds, Tenant shall, upon Landlord's written request, also designate and furnish certificates evidencing such Landlord Parties as additional insureds to (a) any Lender of Landlord holding a security interest in the Building or the Project, (b) the landlord under any lease whereunder Landlord is a tenant of the real property upon which the Building is located if the interest of Landlord is or shall become that of a tenant under a ground lease rather than that of a fee owner and (c) any management company retained by Landlord to manage the Project.

23.5 Tenant assumes the risk of damage to any fixtures, goods, inventory, merchandise, equipment and leasehold improvements, and Landlord shall not be liable for injury to Tenant's business or any loss of income therefrom, relative to such damage, all as more particularly set forth within this Lease. Tenant shall, at Tenant's sole cost and expense, carry such insurance as Tenant desires for Tenant's protection with respect to personal property of Tenant or business interruption.

23.6 Tenant and its insurers hereby waive any and all rights of recovery or subrogation against the Landlord Parties with respect to any loss, damage, claims, suits or demands, howsoever caused, that are covered, or should have been covered, by valid and collectible insurance, including any deductibles or self-insurance maintained thereunder. If necessary, Tenant agrees to endorse the required insurance policies to permit waivers of subrogation as required hereunder and hold

harmless and indemnify the Landlord Parties for any loss or expense incurred as a result of a failure to obtain such waivers of subrogation from insurers. Such waivers shall continue so long as Tenant's insurers so permit. Any termination of such a waiver shall be by written notice to Landlord, containing a description of the circumstances hereinafter set forth in this Section. Tenant, upon obtaining the policies of insurance required or permitted under this Lease, shall give notice to its insurance carriers that the foregoing waiver of subrogation is contained in this Lease. If such policies shall not be obtainable with such waiver or shall be so obtainable only at a premium over that chargeable without such waiver, then Tenant shall notify Landlord of such conditions.

23.7 Landlord may require insurance policy limits required under this Lease to be raised to conform with requirements of Landlord's Lender or to bring coverage limits to levels then being required of new tenants within the Project.

23.8 Any costs incurred by Landlord pursuant to this Article shall constitute a portion of Operating Expenses.

23.9 The provisions of this Section shall survive the expiration or earlier termination of this Lease.

24. Damage or Destruction.

24.1 In the event of a partial destruction of (a) the Premises or (b) Common Area of the Building or the Project ((a) and (b) together, the "Affected Areas") by fire or other perils covered by extended coverage insurance not exceeding twenty-five percent (25%) of the full insurable value thereof, and provided that (x) the damage thereto is such that the Affected Areas may be repaired, reconstructed or restored within a period of six (6) months from the date of the happening of such casualty, (y) Landlord shall receive insurance proceeds sufficient to cover the cost of such repairs, reconstruction and restoration (except for any deductible amount provided by Landlord's policy, which deductible amount, if paid by Landlord, shall constitute an Operating Expense) and (z) such casualty was not intentionally caused by a Tenant Party, then Landlord shall commence and proceed diligently with the work of repair, reconstruction and restoration of the Affected Areas and this Lease shall continue in full force and effect.

24.2 In the event of any damage to or destruction of the Building or the Project other than as described in Section 24.1, Landlord may elect to repair, reconstruct and restore the Building or the Project, as applicable, in which case this Lease shall continue in full force and effect. If Landlord elects not to repair, reconstruct and restore the Building or the Project, as applicable, including an election by Landlord not to repair, reconstruct and restore as provided in Section 24.6 below, then this Lease shall terminate as of the date of such damage or destruction. Notwithstanding the foregoing, in the event of any damage or destruction (regardless of whether such damage is governed by Section 24.1 or this Section), if (a) in Landlord's determination as set forth in the Damage Repair Estimate (as defined below), the Affected Areas cannot be repaired, reconstructed or restored within twelve (12) months after the date of such casualty, (b) subject to Section 24.6, the Affected Areas are not actually repaired, reconstructed and restored within eighteen (18) months after the date of such casualty, or (c) the damage and destruction occurs within the last twelve (12) months of the then-current Term, then Tenant shall have the right to terminate this Lease, effective as of the date of such damage or destruction, by delivering to

Landlord its written notice of termination (a "Termination Notice") (y) with respect to Subsections 24.2(a) and (c), no later than fifteen (15) days after Landlord delivers to Tenant Landlord's Damage Repair Estimate and (z) with respect to Subsection 24.2(b), no later than fifteen (15) days after such twelve (12) month period expires. If Tenant provides Landlord with a Termination Notice pursuant to Subsection 24.2(z), Landlord shall have an additional thirty (30) days after receipt of such Termination Notice to complete the repair, reconstruction and restoration. If Landlord does not complete such repair, reconstruction and restoration within such thirty (30) day period, then Tenant may terminate this Lease by giving Landlord written notice within two (2) business days after the expiration of such thirty (30) day period. If Landlord does complete such repair, reconstruction and restoration within such thirty (30) day period, then this Lease shall continue in full force and effect.

24.3 As soon as reasonably practicable, but in any event within sixty (60) days following the date of damage or destruction, Landlord shall notify Tenant of Landlord's good faith estimate of the period of time in which the repairs, reconstruction and restoration will be completed (the "Damage Repair Estimate"), which estimate shall be based upon the opinion of a contractor reasonably selected by Landlord and experienced in comparable repair, reconstruction and restoration of similar buildings. Additionally, Landlord shall give written notice to Tenant within sixty (60) days following the date of damage or destruction of its election not to repair, reconstruct or restore the Building or the Project, as applicable.

24.4 Upon any termination of this Lease under any of the provisions of this Article, the parties shall be released thereby without further obligation to the other from the date possession of the Premises is surrendered to Landlord, except with regard to (a) items occurring prior to the damage or destruction and (b) provisions of this Lease that, by their express terms, survive the expiration or earlier termination hereof.

24.5 In the event of repair, reconstruction and restoration as provided in this Article, all Rent to be paid by Tenant under this Lease shall be abated proportionately based on the extent to which Tenant's use of the Premises is impaired during the period of such repair, reconstruction or restoration, unless Landlord provides Tenant with other space during the period of repair, reconstruction and restoration that, in Tenant's reasonable opinion, is suitable for the temporary conduct of Tenant's business; provided, however, that the amount of such abatement shall be reduced by the amount of Rent that is received by Tenant as part of the business interruption or loss of rental income with respect to the Premises from the proceeds of business interruption or loss of rental income insurance.

24.6 Notwithstanding anything to the contrary contained in this Article, should Landlord be delayed or prevented from completing the repair, reconstruction or restoration of the damage or destruction to the Premises after the occurrence of such damage or destruction by Force Majeure or delays caused by a Tenant Party, then the time for Landlord to commence or complete repairs, reconstruction and restoration shall be extended on a day-for-day basis; provided, however, that at Landlord's election, Landlord shall be relieved of its obligation to make such repairs, reconstruction and restoration.

24.7 If Landlord is obligated to or elects to repair, reconstruct or restore as herein provided, then Landlord shall be obligated to make such repairs, reconstruction or restoration only with regard to (a) those portions of the Premises that were originally provided at Landlord's expense and (b) the Common Area portion of the Affected Areas. The repairs, reconstruction or restoration of improvements not originally provided by Landlord or at Landlord's expense shall be the obligation of Tenant. In the event Tenant has elected to upgrade certain improvements from the Building Standard, Landlord shall, upon the need for replacement due to an insured loss, provide only the Building Standard, unless Tenant again elects to upgrade such improvements and pay any incremental costs related thereto, except to the extent that excess insurance proceeds, if received, are adequate to provide such upgrades, in addition to providing for basic repairs, reconstruction and restoration of the Premises, the Building and the Project.

24.8 Notwithstanding anything to the contrary contained in this Article, Landlord shall not have any obligation whatsoever to repair, reconstruct or restore the Premises if the damage resulting from any casualty covered under this Article occurs during the last twenty-four (24) months of the Term or any extension thereof, or to the extent that insurance proceeds are not available therefor.

24.9 Landlord's obligation, should it elect or be obligated to repair, reconstruct or restore, shall be limited to the Affected Areas, and shall be conditioned upon Landlord receiving any permits or authorizations required by Applicable Laws. Tenant shall, at its expense, replace or fully repair all of Tenant's personal property and any Alterations installed by Tenant existing at the time of such damage or destruction. If Affected Areas are to be repaired, reconstructed or restored in accordance with the foregoing, Landlord shall make available to Tenant any portion of insurance proceeds it receives that are allocable to the Alterations constructed by Tenant pursuant to this Lease; provided Tenant is not then in default under this Lease, and subject to the requirements of any Lender of Landlord.

24.10 This Article sets forth the terms and conditions upon which this Lease may terminate in the event of any damage or destruction. Accordingly, the parties hereby waive the provisions of any Applicable Laws (and any successor statutes) permitting the parties to terminate this Lease as a result of any damage or destruction to the extent inconsistent with the rights set forth in this Article.

25. Eminent Domain.

25.1 In the event (a) the whole of all Affected Areas or (b) such part of the Affected Areas as shall substantially interfere with Tenant's use and occupancy of the Premises for the Permitted Use shall be taken for any public or quasi-public purpose by any lawful power or authority by exercise of the right of appropriation, condemnation or eminent domain, or sold to prevent such taking, Tenant or Landlord may terminate this Lease effective as of the date possession is required to be surrendered to such authority, except with regard to (y) items occurring prior to the taking and (z) provisions of this Lease that, by their express terms, survive the expiration or earlier termination hereof.

25.2 In the event of a partial taking of (a) the Building or the Project or (b) drives, walkways or parking areas serving the Building or the Project for any public or quasi-public purpose by any lawful power or authority by exercise of right of appropriation, condemnation, or eminent domain, or sold to prevent such taking, then, without regard to whether any portion of the Premises occupied by Tenant was so taken, Landlord may elect to terminate this Lease (except with regard to (y) items occurring prior to the taking and (z) provisions of this Lease that, by their express terms, survive the expiration or earlier termination hereof) as of such taking if such taking is, in Landlord's sole opinion, of a material nature such as to make it uneconomical to continue use of the unappropriated portion for purposes of renting office or laboratory space.

25.3 Tenant shall be entitled to any award that is specifically awarded as compensation for (a) the taking of Tenant's personal property that was installed at Tenant's expense and (b) the costs of Tenant moving to a new location. Except as set forth in the previous sentence, any award for such taking shall be the property of Landlord.

25.4 If, upon any taking of the nature described in this Article, this Lease continues in effect, then Landlord shall promptly proceed to restore the Affected Areas to substantially their same condition prior to such partial taking. To the extent such restoration is infeasible, as determined by Landlord in its sole and absolute discretion, the Rent shall be decreased proportionately to reflect the loss of any portion of the Premises no longer available to Tenant.

25.5 This Article sets forth the terms and conditions upon which this Lease may terminate in the event of any damage or destruction. Accordingly, the parties hereby waive the provisions of any Applicable Laws (and any successor statutes) permitting the parties to terminate this Lease as a result of any damage or destruction to the extent inconsistent with the rights set forth in this Article.

26. Surrender.

26.1 At least thirty (30) days prior to Tenant's surrender of possession of any part of the Premises, Tenant shall provide Landlord with a facility decommissioning and Hazardous Materials closure plan for the Premises ("Exit Survey") prepared by an independent third party state-certified professional with appropriate expertise, which Exit Survey must be reasonably acceptable to Landlord. The Exit Survey shall comply with the American National Standards Institute's Laboratory Decommissioning guidelines (ANSI/AIHA Z9.11-2008) or any successor standards published by ANSI or any successor organization (or, if ANSI and its successors no longer exist, a similar entity publishing similar standards). In addition, at least ten (10) days prior to Tenant's surrender of possession of any part of the Premises, Tenant shall (a) provide Landlord with written evidence of all appropriate governmental releases obtained by Tenant in accordance with Applicable Laws, including laws pertaining to the surrender of the Premises, (b) place Laboratory Equipment Decontamination Forms on all decommissioned equipment to assure safe occupancy by future users and (c) conduct a site inspection with Landlord. In addition, Tenant agrees to remain responsible after the surrender of the Premises for the remediation of any recognized environmental conditions set forth in the Exit Survey and comply with any recommendations set forth in the Exit Survey. Tenant's obligations under this Section shall survive the expiration or earlier termination of the Lease.

26.2 No surrender of possession of any part of the Premises shall release Tenant from any of its obligations hereunder, unless such surrender is accepted in writing by Landlord.

26.3 The voluntary or other surrender of this Lease by Tenant shall not effect a merger with Landlord's fee title or leasehold interest in the Premises, the Building, the Property or the Project, unless Landlord consents in writing, and shall, at Landlord's option, operate as an assignment to Landlord of any or all subleases.

26.4 The voluntary or other surrender of any ground or other underlying lease that now exists or may hereafter be executed affecting the Building or the Project, or a mutual cancellation thereof or of Landlord's interest therein by Landlord and its lessor shall not effect a merger with Landlord's fee title or leasehold interest in the Premises, the Building or the Property and shall, at the option of the successor to Landlord's interest in the Building or the Project, as applicable, operate as an assignment of this Lease.

27. Holding Over.

27.1 If, with Landlord's prior written consent, Tenant holds possession of all or any part of the Premises after the Term, Tenant shall become a tenant from month to month after the expiration or earlier termination of the Term, and in such case Tenant shall continue to pay (a) Base Rent in accordance with Article 7, as adjusted in accordance with Article 8, and (b) any amounts for which Tenant would otherwise be liable under this Lease if the Lease were still in effect, including payments for Tenant's Adjusted Share of Operating Expenses. Any such month-to-month tenancy shall be subject to every other term, covenant and agreement contained herein.

27.2 Notwithstanding the foregoing, if Tenant remains in possession of the Premises after the expiration or earlier termination of the Term without Landlord's prior written consent, (a) Tenant shall become a tenant at sufferance subject to the terms and conditions of this Lease, except that the monthly rent shall be equal to one hundred fifty percent (150%) of the Rent in effect during the last thirty (30) days of the Term, and (b) Tenant shall be liable to Landlord for any and all damages suffered by Landlord as a result of such holdover, including any lost rent or consequential, special and indirect damages (in each case, regardless of whether such damages are foreseeable).

27.3 Acceptance by Landlord of Rent after the expiration or earlier termination of the Term shall not result in an extension, renewal or reinstatement of this Lease.

27.4 The foregoing provisions of this Article are in addition to and do not affect Landlord's right of reentry or any other rights of Landlord hereunder or as otherwise provided by Applicable Laws.

27.5 The provisions of this Article shall survive the expiration or earlier termination of this Lease.

28. Indemnification and Exculpation.

28.1 Tenant agrees to indemnify, save, defend (at Landlord's option and with counsel reasonably acceptable to Landlord) and hold the Landlord Indemnitees harmless from and against any and all Claims of any kind or nature, real or alleged, arising from injury to or death of any person or damage to any property occurring within or about the Premises, the Building, the

Property or the Project, arising directly or indirectly out of (a) the presence at or use or occupancy of the Premises or Project by a Tenant Party, (b) an act or omission on the part of any Tenant Party, (c) a breach or default by Tenant in the performance of any of its obligations hereunder or (d) injury to or death of persons or damage to or loss of any property, real or alleged, arising from the serving of alcoholic beverages at the Premises or Project, including liability under any dram shop law, host liquor law or similar Applicable Law, except to the extent directly caused by Landlord's negligence or willful misconduct. Tenant's obligations under this Section shall not be affected, reduced or limited by any limitation on the amount or type of damages, compensation or benefits payable by or for Tenant under workers' compensation acts, disability benefit acts, employee benefit acts or similar legislation. Tenant's obligations under this Section shall survive the expiration or earlier termination of this Lease. Subject to Sections 23.6, 28.2 and 31.12 and any subrogation provisions contained in the Work Letter, Landlord agrees to indemnify, save, defend (at Tenant's option and with counsel reasonably acceptable to Tenant) and hold the Tenant Parties harmless from and against any and all Claims arising from injury to or death of any person or damage to or loss of any physical property occurring within or about the Premises, the Building, the Property or the Project to the extent directly arising out of Landlord's gross negligence or willful misconduct.

28.2 Notwithstanding anything in this Lease to the contrary, Landlord shall not be liable to Tenant for and Tenant assumes all risk of (a) damage or losses caused by fire, electrical malfunction, gas explosion or water damage of any type (including broken water lines, malfunctioning fire sprinkler systems, roof leaks or stoppages of lines), unless any such loss is due to Landlord's willful disregard of written notice by Tenant of need for a repair that Landlord is responsible to make for an unreasonable period of time, and (b) damage to personal property or scientific research, including loss of records kept by Tenant within the Premises (in each case, regardless of whether such damages are foreseeable). Tenant further waives any claim for injury to Tenant's business or loss of income relating to any such damage or destruction of personal property as described in this Section. Notwithstanding anything in the foregoing or this Lease to the contrary, except (x) as otherwise provided herein (including Section 27.2), (y) as may be provided by Applicable Laws or (z) in the event of Tenant's breach of Article 21 or Section 26.1, in no event shall Landlord or Tenant be liable to the other for any consequential, special or indirect damages arising out of this Lease, including lost profits (provided that this Subsection 28.2(z) shall not limit Tenant's liability for Base Rent or Additional Rent pursuant to this Lease).

28.3 Landlord shall not be liable for any damages arising from any act, omission or neglect of any other tenant in the Building or the Project, or of any other third party.

28.4 Tenant acknowledges that security devices and services, if any, while intended to deter crime, may not in given instances prevent theft or other criminal acts. Landlord shall not be liable for injuries or losses caused by criminal acts of third parties, and Tenant assumes the risk that any security device or service may malfunction or otherwise be circumvented by a criminal. If Tenant desires protection against such criminal acts, then Tenant shall, at Tenant's sole cost and expense, obtain appropriate insurance coverage. Tenant's security programs and equipment for the Premises shall be coordinated with Landlord and subject to Landlord's reasonable approval.

28.5 The provisions of this Article shall survive the expiration or earlier termination of this Lease.

29. Assignment or Subletting.

29.1 Except as hereinafter expressly permitted, none of the following (each, a “Transfer”), either voluntarily or by operation of Applicable Laws, shall be directly or indirectly performed without Landlord’s prior written consent: (a) Tenant selling, hypothecating, assigning, pledging, encumbering or otherwise transferring this Lease or subletting the Premises or (b) a controlling interest in Tenant being sold, assigned or otherwise transferred (other than as a result of shares in Tenant being sold on a public stock exchange). For purposes of the preceding sentence, “control” means (a) owning (directly or indirectly) more than fifty percent (50%) of the stock or other equity interests of another person or (b) possessing, directly or indirectly, the power to direct or cause the direction of the management and policies of such person. Notwithstanding the foregoing, Tenant shall have the right to Transfer, without Landlord’s prior written consent, Tenant’s interest in this Lease or the Premises or any part thereof (i) any person that as of the date of determination and at all times thereafter directly, or indirectly through one or more intermediaries, controls, is controlled by or is under common control with Tenant (“Tenant’s Affiliate”) or (ii) any person or any entity with which Tenant is merged or to which all or substantially all of Tenant’s assets or all or substantially all of the ownership interests in Tenant are sold; provided that (in each instance under the foregoing clauses (i) and (ii)); provided that Tenant shall notify Landlord in writing at least thirty (30) days prior to the effectiveness of such Transfer (an “Exempt Transfer”) and otherwise comply with the requirements of this Lease regarding such Transfer; and provided, further, that the person that will be the tenant under this Lease after the Exempt Transfer has a net worth (as of both the day immediately prior to and the day immediately after the Exempt Transfer) that is equal to or greater than the net worth (as of both the Execution Date and the date of the Exempt Transfer) of the transferring Tenant. For purposes of the immediately preceding sentence, “control” requires both (a) owning (directly or indirectly) more than fifty percent (50%) of the stock or other equity interests of another person and (b) possessing, directly or indirectly, the power to direct or cause the direction of the management and policies of such person. In no event shall Tenant perform a Transfer to or with an entity that is a tenant at the Project or the Neighboring Property located at 21 Erie Street, Cambridge, Massachusetts (“21 Erie Street”) or 270 Albany Street, Cambridge, Massachusetts (“270 Albany Street”) or that, to the knowledge of Tenant’s executive officers as may be informed by Tenant’s representatives or Landlord, is in discussions or negotiations with Landlord or an affiliate of Landlord to lease premises at the Project, 21 Erie Street or 270 Albany Street. Notwithstanding anything in this Lease to the contrary, if (a) Tenant or any proposed transferee, assignee or sublessee of Tenant has been required by any prior landlord, Lender or Governmental Authority to take material remedial action in connection with Hazardous Materials contaminating a property if the contamination resulted from such party’s action or omission or use of the property in question or (b) Tenant or any proposed transferee, assignee or sublessee is subject to a material enforcement order issued by any Governmental Authority in connection with the use, disposal or storage of Hazardous Materials, then Landlord shall have the right to terminate this Lease in Landlord’s sole and absolute discretion (with respect to any such matter involving Tenant), and it shall not be unreasonable for Landlord to withhold its consent to any proposed transfer, assignment or subletting (with respect to any such matter involving a proposed transferee, assignee or sublessee).

29.2 In the event Tenant desires to effect a Transfer, then, at least thirty (30) but not more than ninety (90) days prior to the date when Tenant desires the Transfer to be effective (the "Transfer Date"), Tenant shall provide written notice to Landlord (the "Transfer Notice") containing information (including references) concerning the character of the proposed transferee, assignee or sublessee; the Transfer Date; the most recent unconsolidated financial statements of Tenant and of the proposed transferee, assignee or sublessee satisfying the requirements of Section 40.2 ("Required Financials"); any ownership or commercial relationship between Tenant and the proposed transferee, assignee or sublessee; and the consideration and all other material terms and conditions of the proposed Transfer, all in such detail as Landlord shall reasonably require.

29.3 Landlord, in determining whether consent should be given to a proposed Transfer, may give consideration to (a) the financial strength of Tenant and of such transferee, assignee or sublessee (notwithstanding Tenant remaining liable for Tenant's performance), (b) any change in use that such transferee, assignee or sublessee proposes to make in the use of the Premises and (c) Landlord's desire to exercise its rights under Section 29.7 to cancel this Lease. In no event shall Landlord be deemed to be unreasonable for declining to consent to a Transfer to a transferee, assignee or sublessee of poor reputation, lacking financial qualifications or seeking a change in the Permitted Use, or jeopardizing directly or indirectly the status of Landlord or any of Landlord's affiliates as a Real Estate Investment Trust under the Internal Revenue Code of 1986 (as the same may be amended from time to time, the "Revenue Code"). Notwithstanding anything contained in this Lease to the contrary, (w) no Transfer shall be consummated on any basis such that the rental or other amounts to be paid by the occupant, assignee, manager or other transferee thereunder would be based, in whole or in part, on the income or profits derived by the business activities of such occupant, assignee, manager or other transferee; (x) Tenant shall not furnish or render any services to an occupant, assignee, manager or other transferee with respect to whom transfer consideration is required to be paid, or manage or operate the Premises or any capital additions so transferred, with respect to which transfer consideration is being paid; (y) Tenant shall not consummate a Transfer with any person in which Landlord owns an interest, directly or indirectly (by applying constructive ownership rules set forth in Section 856(d)(5) of the Revenue Code); and (z) Tenant shall not consummate a Transfer with any person or in any manner that could cause any portion of the amounts received by Landlord pursuant to this Lease or any sublease, license or other arrangement for the right to use, occupy or possess any portion of the Premises to fail to qualify as "rents from real property" within the meaning of Section 856(d) of the Revenue Code, or any similar or successor provision thereto or which could cause any other income of Landlord to fail to qualify as income described in Section 856(c)(2) of the Revenue Code.

29.4 The following are conditions precedent to a Transfer or to Landlord considering a request by Tenant to a Transfer:

(a) Tenant shall remain fully liable under this Lease. Tenant agrees that it shall not be (and shall not be deemed to be) a guarantor or surety of this Lease, however, and waives its right to claim that it is a guarantor or surety or to raise in any legal proceeding any guarantor or surety defenses permitted by this Lease or by Applicable Laws;

(b) If Tenant or the proposed transferee, assignee or sublessee does not or cannot deliver the Required Financials, then Landlord may elect to have either Tenant's ultimate parent company or the proposed transferee's, assignee's or sublessee's ultimate parent company provide a guaranty of the applicable entity's obligations under this Lease, in a form acceptable to Landlord, which guaranty shall be executed and delivered to Landlord by the applicable guarantor prior to the Transfer Date;

(c) In the case of an Exempt Transfer, Tenant shall provide Landlord with evidence reasonably satisfactory to Landlord that the Transfer qualifies as an Exempt Transfer;

(d) Tenant shall provide Landlord with evidence reasonably satisfactory to Landlord that the value of Landlord's interest under this Lease shall not be diminished or reduced by the proposed Transfer. Such evidence shall include evidence respecting the relevant business experience and financial responsibility and status of the proposed transferee, assignee or sublessee;

(e) Tenant shall reimburse Landlord for Landlord's actual costs and expenses, including reasonable attorneys' fees, charges and disbursements incurred in connection with the review, processing and documentation of such request;

(f) Except with respect to an Exempt Transfer, if Tenant's transfer of rights or sharing of the Premises provides for the receipt by, on behalf of or on account of Tenant of any consideration of any kind whatsoever (including a premium rental for a sublease or lump sum payment for an assignment, but excluding Tenant's reasonable costs in marketing and subleasing the Premises) in excess of the rental and other charges due to Landlord under this Lease, Tenant shall pay fifty percent (50%) of all of such excess to Landlord, after making deductions for any reasonable marketing expenses, tenant improvement funds expended by Tenant, alterations, cash concessions, brokerage commissions, attorneys' fees and free rent actually paid by Tenant. If such consideration consists of cash paid to Tenant, payment to Landlord shall be made upon receipt by Tenant of such cash payment;

(g) The proposed transferee, assignee or sublessee shall agree that, in the event Landlord gives such proposed transferee, assignee or sublessee notice that Tenant is in default under this Lease, such proposed transferee, assignee or sublessee shall thereafter make all payments otherwise due Tenant directly to Landlord, which payments shall be received by Landlord without any liability being incurred by Landlord, except to credit such payment against those due by Tenant under this Lease, and any such proposed transferee, assignee or sublessee shall agree to attorn to Landlord or its successors and assigns should this Lease be terminated for any reason; provided, however, that in no event shall Landlord or its Lenders, successors or assigns be obligated to accept such attornment;

(h) Landlord's consent to any such Transfer shall be effected on Landlord's forms;

(i) Tenant shall not then be in default hereunder in any respect;

(j) Such proposed transferee, assignee or sublessee's use of the Premises shall be the same as the Permitted Use;

(k) Landlord shall not be bound by any provision of any agreement pertaining to the Transfer, except for Landlord's written consent to the same;

(l) Tenant shall pay all transfer and other taxes (including interest and penalties) assessed or payable for any Transfer;

(m) Landlord's consent (or waiver of its rights) for any Transfer shall not waive Landlord's right to consent or refuse consent to any later Transfer;

(n) Tenant shall deliver to Landlord one executed copy of any and all written instruments evidencing or relating to the Transfer; and

(o) Tenant shall deliver to Landlord a list of Hazardous Materials (as defined below), certified by the proposed transferee, assignee or sublessee to be true and correct, that the proposed transferee, assignee or sublessee intends to use or store in the Premises. Additionally, Tenant shall deliver to Landlord, on or before the date any proposed transferee, assignee or sublessee takes occupancy of the Premises, all of the items relating to Hazardous Materials of such proposed transferee, assignee or sublessee as described in Section 21.2.

29.5 Any Transfer that is not in compliance with the provisions of this Article or with respect to which Tenant does not fulfill its obligations pursuant to this Article shall be void and shall, at the option of Landlord, terminate this Lease.

29.6 Notwithstanding any Transfer, Tenant shall remain fully and primarily liable for the payment of all Rent and other sums due or to become due hereunder, and for the full performance of all other terms, conditions and covenants to be kept and performed by Tenant. The acceptance of Rent or any other sum due hereunder, or the acceptance of performance of any other term, covenant or condition thereof, from any person or entity other than Tenant shall not be deemed a waiver of any of the provisions of this Lease or a consent to any Transfer.

29.7 If Tenant delivers to Landlord a Transfer Notice indicating a desire to transfer this Lease to a proposed transferee, assignee or sublessee, other than pursuant to an Exempt Transfer, then Landlord shall have the option, exercisable by giving notice to Tenant at any time within ten (10) days after Landlord's receipt of such Transfer Notice, to terminate this Lease as of the date specified in the Transfer Notice as the Transfer Date, except for those provisions that, by their express terms, survive the expiration or earlier termination hereof. If Landlord exercises such option, then Tenant shall have the right to withdraw such Transfer Notice by delivering to Landlord written notice of such election within ten (10) days after Landlord's delivery of notice electing to exercise Landlord's option to terminate this Lease. In the event Tenant withdraws the Transfer Notice as provided in this Section, this Lease shall continue in full force and effect. No failure of Landlord to exercise its option to terminate this Lease shall be deemed to be Landlord's consent to a proposed Transfer.

29.8 If Tenant sublets the Premises or any portion thereof, Tenant hereby immediately and irrevocably assigns to Landlord, as security for Tenant's obligations under this Lease, all rent from any such subletting, and appoints Landlord as assignee and attorney-in-fact for Tenant, and Landlord (or a receiver for Tenant appointed on Landlord's application) may collect such rent and apply it toward Tenant's obligations under this Lease; provided that, until the occurrence of a Default (as defined below) by Tenant, Tenant shall have the right to collect such rent.

30. Subordination and Attornment.

30.1 This Lease shall be subject and subordinate to the lien of any mortgage, deed of trust, or lease in which Landlord is tenant now or hereafter in force against the Building or the Project and to all advances made or hereafter to be made upon the security thereof without the necessity of the execution and delivery of any further instruments on the part of Tenant to effectuate such subordination.

30.2 Notwithstanding the foregoing, Tenant shall execute and deliver upon demand such further instrument or instruments evidencing such subordination of this Lease to the lien of any such mortgage or mortgages or deeds of trust or lease in which Landlord is tenant as may be required by Landlord. If any such mortgagee, beneficiary or landlord under a lease wherein Landlord is tenant (each, a "Mortgagee") so elects, however, this Lease shall be deemed prior in lien to any such lease, mortgage, or deed of trust upon or including the Premises regardless of date and Tenant shall execute a statement in writing to such effect at Landlord's request. If Tenant fails to execute any document required from Tenant under this Section within ten (10) days after written request therefor, Tenant hereby constitutes and appoints Landlord or its special attorney-in-fact to execute and deliver any such document or documents in the name of Tenant. Such power is coupled with an interest and is irrevocable. For the avoidance of doubt, "Mortgagees" shall also include historic tax credit investors and new market tax credit investors.

30.3 Upon written request of Landlord and opportunity for Tenant to review, Tenant agrees to execute any Lease amendments which do not materially increase the obligations of Tenant under this Lease, materially decrease the rights of Tenant under this Lease or materially change the size or location of the Premises, if required by a Mortgagee incident to the financing of the real property of which the Premises constitute a part.

30.4 In the event any proceedings are brought for foreclosure, or in the event of the exercise of the power of sale under any mortgage or deed of trust made by Landlord covering the Premises, Tenant shall at the election of the purchaser at such foreclosure or sale attorn to the purchaser upon any such foreclosure or sale and recognize such purchaser as Landlord under this Lease.

31. Defaults and Remedies.

31.1 Late payment by Tenant to Landlord of Rent and other sums due shall cause Landlord to incur costs not contemplated by this Lease, the exact amount of which shall be extremely difficult and impracticable to ascertain. Such costs include processing and accounting charges and late charges that may be imposed on Landlord by the terms of any mortgage or trust deed covering the Premises. Therefore, if any installment of Rent due from Tenant is not received by Landlord within three (3) days after the date such payment is due, Tenant shall pay to Landlord (a) an additional sum of six percent (6%) of the overdue Rent as a late charge plus (b) interest at an annual rate (the "Default Rate") equal to the lesser of (a) twelve percent (12%) and (b) the highest rate permitted by Applicable Laws. The parties agree that this late charge represents a fair and reasonable estimate of the costs that Landlord shall incur by reason of late payment by Tenant and shall be payable as Additional Rent to Landlord due with the next installment of Rent or within five (5) business days after Landlord's demand, whichever is earlier. Landlord's acceptance of any Additional Rent (including a late charge or any other amount hereunder) shall not be deemed an extension of the date that Rent is due or prevent Landlord from pursuing any other rights or remedies under this Lease, at law or in equity.

31.2 No payment by Tenant or receipt by Landlord of a lesser amount than the Rent payment herein stipulated shall be deemed to be other than on account of the Rent, nor shall any endorsement or statement on any check or any letter accompanying any check or payment as Rent be deemed an accord and satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such Rent or pursue any other remedy provided in this Lease or in equity or at law. If a dispute shall arise as to any amount or sum of money to be paid by Tenant to Landlord hereunder, Tenant shall have the right to make payment "under protest," such payment shall not be regarded as a voluntary payment, and there shall survive the right on the part of Tenant to institute suit for recovery of the payment paid under protest.

31.3 If Tenant fails to pay any sum of money required to be paid by it hereunder or perform any other act on its part to be performed hereunder, in each case within the applicable cure period (if any) described in Section 31.4, then Landlord may (but shall not be obligated to), without waiving or releasing Tenant from any obligations of Tenant, make such payment or perform such act; provided that such failure by Tenant unreasonably interfered with the use of the Building or the Project by any other tenant or with the efficient operation of the Building or the Project, or resulted or could have resulted in a violation of Applicable Laws or the cancellation of an insurance policy maintained by Landlord. Notwithstanding the foregoing, in the event of an emergency, Landlord shall have the right to enter the Premises and act in accordance with its rights as provided elsewhere in this Lease. In addition to the late charge described in Section 31.1, Tenant shall pay to Landlord as Additional Rent all sums so paid or incurred by Landlord, together with interest at the Default Rate, computed from the date such sums were paid or incurred.

31.4 The occurrence of any one or more of the following events shall constitute a "Default" hereunder by Tenant:

(a) Tenant (i) abandons the Premises; or (ii)(A) Landlord receives notice of Tenant's vacation of or Tenant's intention to vacate the Premises prior to the scheduled expiration or earlier termination of this Lease, other than in accordance with a right expressly granted to Tenant under this Lease, and such vacation (or intention to vacate) is related to financial hardship or Tenant's inability to pay its debts as they become due, a dissolution of Tenant, or the liquidation or winding up of Tenant's business operations; or (B) Tenant vacates the Premises prior to the scheduled expiration or earlier termination of this Lease, other than in accordance with a right expressly granted to Tenant under this Lease, within the one-hundred twenty (120) day period following the filing of any involuntary petition against Tenant or the attachment of Tenant's interest in this Lease (notwithstanding anything to the contrary in Sections 31.4(g) and 31.4(i));

(b) Tenant fails to make any payment of Rent, as and when due, or to satisfy its obligations under Article 19, where such failure shall continue for a period of three (3) days after written notice thereof from Landlord to Tenant;

(c) Tenant fails to observe or perform any obligation or covenant contained herein (other than described in Sections 31.4(a) and 31.4(b)) to be performed by Tenant, where such failure continues for a period of thirty (30) days after written notice thereof from Landlord to Tenant; provided that, if the nature of Tenant's default is such that it reasonably requires more than thirty (30) days to cure, Tenant shall not be deemed to be in Default if Tenant commences such cure within such thirty (30) day period and thereafter diligently prosecutes the same to completion; and provided, further, that such cure is completed no later than sixty (60) days after Tenant's receipt of written notice from Landlord;

(d) Tenant makes an assignment for the benefit of creditors;

(e) A receiver, trustee or custodian is appointed to or does take title, possession or control of all or substantially all of Tenant's assets;

(f) Tenant files a voluntary petition under the United States Bankruptcy Code or any successor statute (as the same may be amended from time to time, the "Bankruptcy Code") or an order for relief is entered against Tenant pursuant to a voluntary or involuntary proceeding commenced under any chapter of the Bankruptcy Code;

(g) Any involuntary petition is filed against Tenant under any chapter of the Bankruptcy Code and is not dismissed within one hundred twenty (120) days;

(h) Tenant fails to deliver an estoppel certificate in accordance with Article 20; or

(i) Tenant's interest in this Lease is attached, executed upon or otherwise judicially seized and such action is not released within one hundred twenty (120) days of the action.

Notices given under this Section shall specify the alleged default and shall demand that Tenant perform the provisions of this Lease or pay the Rent that is in arrears, as the case may be, within the applicable period of time, or quit the Premises. No such notice shall be deemed a forfeiture or a termination of this Lease unless Landlord elects otherwise in such notice.

31.5 In the event of a Default by Tenant, and at any time thereafter, with or without notice or demand and without limiting Landlord in the exercise of any right or remedy that Landlord may have, Landlord has the right to do any or all of the following:

(a) Halt any Tenant Improvements or Landlord's Work and Alterations and order Tenant's contractors, subcontractors, consultants, designers and material suppliers to stop work;

(b) Terminate Tenant's right to possession of the Premises by written notice to Tenant or by any lawful means, in which case Tenant shall immediately surrender possession of the Premises to Landlord. In such event, Landlord shall have the immediate right to re-enter and remove all persons and property, and such property may be removed and stored in a public warehouse or elsewhere at the cost and for the account of Tenant, all without service of notice or resort to legal process and without being deemed guilty of trespass or becoming liable for any loss or damage that may be occasioned thereby; and

(i) Terminate this Lease, in which event Tenant shall immediately surrender possession of the Premises to Landlord. In such event, Landlord shall have the immediate right to re-enter and remove all persons and property, and such property may be removed and stored in a public warehouse or elsewhere at the cost and for the account of Tenant, all without service of notice or resort to legal process and without being deemed guilty of trespass or becoming liable for any loss or damage that may be occasioned thereby. In the event that Landlord shall elect to so terminate this Lease, then Landlord shall be entitled to recover from Tenant all damages incurred by Landlord by reason of Tenant's default, including the sum of:

(A) The worth at the time of award of any unpaid Rent that had accrued at the time of such termination; plus

(B) The costs of restoring the Premises to the condition required under the terms of this Lease; plus

(C) An amount (the "Election Amount") equal to either (A) the positive difference (if any, and measured at the time of such termination) between (1) the then-present value of the total Rent and other benefits that would have accrued to Landlord under this Lease for the remainder of the Term if Tenant had fully complied with the Lease minus (2) the then-present cash rental value of the Premises as determined by Landlord for what would be the then-unexpired Term if the Lease remained in effect, computed using the discount rate of the Federal Reserve Bank of San Francisco at the time of the award plus one (1) percentage point (the "Discount Rate") or (B) twelve (12) months (or such lesser number of months as may then be remaining in the Term) of Base Rent and Additional Rent at the rate last payable by Tenant pursuant to this Lease, in either case as Landlord specifies in such election. Landlord and Tenant agree that the Election Amount represents a reasonable forecast of the minimum damages expected to occur in the event of a breach, taking into account the uncertainty, time and cost of determining elements relevant to actual damages, such as fair market rent, time and costs that may be required to re-lease the Premises, and other factors; and that the Election Amount is not a penalty.

As used in Section 31.5(c)(i), "worth at the time of award" shall be computed by allowing interest at the Default Rate.

31.6 In addition to any other remedies available to Landlord at law or in equity and under this Lease, Landlord may continue this Lease in effect after Tenant's Default or abandonment and recover Rent as it becomes due. In addition, Landlord shall not be liable in any way whatsoever for its failure or refusal to relet the Premises. For purposes of this Section, the following acts by Landlord will not constitute the termination of Tenant's right to possession of the Premises:

(a) Acts of maintenance or preservation or efforts to relet the Premises, including alterations, remodeling, redecorating, repairs, replacements or painting as Landlord shall consider advisable for the purpose of reletting the Premises or any part thereof; or

(b) The appointment of a receiver upon the initiative of Landlord to protect Landlord's interest under this Lease or in the Premises.

Notwithstanding the foregoing, in the event of a Default by Tenant, Landlord may elect at any time to terminate this Lease and to recover damages to which Landlord is entitled.

31.7 If Landlord does not elect to terminate this Lease as provided in Section 31.5, then Landlord may, from time to time, recover all Rent as it becomes due under this Lease. At any time thereafter, Landlord may elect to terminate this Lease and to recover damages to which Landlord is entitled.

31.8 In the event Landlord elects to terminate this Lease and relet the Premises, Landlord may execute any new lease in its own name. Tenant hereunder shall have no right or authority whatsoever to collect any Rent from such tenant. The proceeds of any such reletting shall be applied as follows:

(a) First, to the payment of any indebtedness other than Rent due hereunder from Tenant to Landlord, including storage charges or brokerage commissions owing from Tenant to Landlord as the result of such reletting;

(b) Second, to the payment of the costs and expenses of reletting the Premises, including (i) alterations and repairs that Landlord deems reasonably necessary and advisable and (ii) reasonable attorneys' fees, charges and disbursements incurred by Landlord in connection with the retaking of the Premises and such reletting;

(c) Third, to the payment of Rent and other charges due and unpaid hereunder; and

(d) Fourth, to the payment of future Rent and other damages payable by Tenant under this Lease.

31.9 All of Landlord's rights, options and remedies hereunder shall be construed and held to be nonexclusive and cumulative. Landlord shall have the right to pursue any one or all of such remedies, or any other remedy or relief that may be provided by Applicable Laws, whether or not stated in this Lease. No waiver of any default of Tenant hereunder shall be implied from any acceptance by Landlord of any Rent or other payments due hereunder or any omission by Landlord to take any action on account of such default if such default persists or is repeated, and no express waiver shall affect defaults other than as specified in such waiver. Notwithstanding any provision of this Lease to the contrary, in no event shall Landlord be required to mitigate its damages with respect to any default by Tenant, unless or to the extent required by Applicable Laws. Any obligation imposed by Applicable Law upon Landlord to relet the Premises after any termination of this Lease shall be subject to the reasonable requirements of Landlord to (a) lease to high quality tenants on such terms as Landlord may from time to time deem appropriate in its discretion and (b) develop the Project in a harmonious manner with a mix of uses, tenants, floor

areas, terms of tenancies, etc., as determined by Landlord. Landlord shall not be obligated to relet the Premises to (y) any Tenant's Affiliate or (z) any party (i) unacceptable to a Lender, (ii) that requires Landlord to make improvements to or re-demise the Premises, (iii) that desires to change the Permitted Use, (iv) that desires to lease the Premises for more or less than the remaining Term or (v) to whom Landlord or an affiliate of Landlord may desire to lease other available space in the Project or at another property owned by Landlord or an affiliate of Landlord.

31.10 Landlord's termination of (a) this Lease or (b) Tenant's right to possession of the Premises shall not relieve Tenant of any liability to Landlord that has previously accrued or that shall arise based upon events that occurred prior to the later to occur of (y) the date of Lease termination and (z) the date Tenant surrenders possession of the Premises.

31.11 To the extent permitted by Applicable Laws, Tenant waives any and all rights of redemption granted by or under any present or future Applicable Laws if Tenant is evicted or dispossessed for any cause, or if Landlord obtains possession of the Premises due to Tenant's default hereunder or otherwise.

31.12 Landlord shall not be in default or liable for damages under this Lease unless Landlord fails to perform obligations required of Landlord within a reasonable time, but in no event shall such failure continue for more than thirty (30) days after written notice from Tenant specifying the nature of Landlord's failure; provided, however, that if the nature of Landlord's obligation is such that more than thirty (30) days are required for its performance, then Landlord shall not be in default if Landlord commences performance within such thirty (30) day period and thereafter diligently prosecutes the same to completion. In no event shall Tenant have the right to terminate or cancel this Lease or to withhold or abate rent or to set off any Claims against Rent as a result of any default or breach by Landlord of any of its covenants, obligations, representations, warranties or promises hereunder, except as may otherwise be expressly set forth in this Lease.

31.13 In the event of any default by Landlord, Tenant shall give notice by registered or certified mail to any (a) beneficiary of a deed of trust or (b) mortgagee under a mortgage covering the Premises, the Building or the Project and to any landlord of any lease of land upon or within which the Premises, the Building or the Project is located, and shall offer such beneficiary, mortgagee or landlord a reasonable opportunity to cure the default, including time to obtain possession of the Building or the Project by power of sale or a judicial action if such should prove necessary to effect a cure; provided that Landlord shall furnish to Tenant in writing, upon written request by Tenant, the names and addresses of all such persons who are to receive such notices.

32. Bankruptcy. In the event a debtor, trustee or debtor in possession under the Bankruptcy Code, or another person with similar rights, duties and powers under any other Applicable Laws, proposes to cure any default under this Lease or to assume or assign this Lease and is obliged to provide adequate assurance to Landlord that (a) a default shall be cured, (b) Landlord shall be compensated for its damages arising from any breach of this Lease and (c) future performance of Tenant's obligations under this Lease shall occur, then such adequate assurances shall include any or all of the following, as designated by Landlord in its sole and absolute discretion:

32.1 Those acts specified in the Bankruptcy Code or other Applicable Laws as included within the meaning of “adequate assurance,” even if this Lease does not concern a shopping center or other facility described in such Applicable Laws;

32.2 A prompt cash payment to compensate Landlord for any monetary defaults or actual damages arising directly from a breach of this Lease;

32.3 A cash deposit in an amount at least equal to the then-current amount of the Security Deposit; or

32.4 The assumption or assignment of all of Tenant’s interest and obligations under this Lease.

33. Brokers.

33.1 Tenant represents and warrants that it has had no dealings with any real estate broker or agent in connection with the negotiation of this Lease other than Jones Lang LaSalle (“Broker”), and that it knows of no other real estate broker or agent that is or might be entitled to a commission in connection with this Lease. Landlord shall compensate Broker in relation to this Lease pursuant to a separate agreement between Landlord and Broker.

33.2 Tenant represents and warrants that no broker or agent has made any representation or warranty relied upon by Tenant in Tenant’s decision to enter into this Lease, other than as contained in this Lease.

33.3 Tenant acknowledges and agrees that the employment of brokers by Landlord is for the purpose of solicitation of offers of leases from prospective tenants and that no authority is granted to any broker to furnish any representation (written or oral) or warranty from Landlord unless expressly contained within this Lease. Landlord is executing this Lease in reliance upon Tenant’s representations, warranties and agreements contained within Sections 33.1 and 33.2.

33.4 Tenant agrees to indemnify, save, defend (at Landlord’s option and with counsel reasonably acceptable to Landlord) and hold the Landlord Indemnitees harmless from any and all cost or liability for compensation claimed by any broker or agent, other than Broker, employed or engaged by Tenant or claiming to have been employed or engaged by Tenant.

34. Definition of Landlord. With regard to obligations imposed upon Landlord pursuant to this Lease, the term “Landlord,” as used in this Lease, shall refer only to Landlord or Landlord’s then-current successor-in-interest. In the event of any transfer, assignment or conveyance of Landlord’s interest in this Lease or in Landlord’s fee title to or leasehold interest in the Property, as applicable, Landlord herein named (and in case of any subsequent transfers or conveyances, the subsequent Landlord) shall be automatically freed and relieved, from and after the date of such transfer, assignment or conveyance, from all liability for the performance of any covenants or obligations contained in this Lease thereafter to be performed by Landlord and, without further agreement, the transferee, assignee or conveyee of Landlord’s in this Lease or in Landlord’s fee title to or

leasehold interest in the Property, as applicable, shall be deemed to have assumed and agreed to observe and perform any and all covenants and obligations of Landlord hereunder during the tenure of its interest in the Lease or the Property. Landlord or any subsequent Landlord may transfer its interest in the Premises or this Lease without Tenant's consent.

35. Limitation of Landlord's Liability.

35.1 If Landlord is in default under this Lease and, as a consequence, Tenant recovers a monetary judgment against Landlord, the judgment shall be satisfied only out of (a) the proceeds of sale received on execution of the judgment and levy against the right, title and interest of Landlord in the Building and the Project, (b) rent or other income from such real property receivable by Landlord or (c) the consideration received by Landlord from the sale, financing, refinancing or other disposition of all or any part of Landlord's right, title or interest in the Building or the Project.

35.2 Neither Landlord nor any of its affiliates, nor any of their respective partners, shareholders, directors, officers, employees, members or agents shall be personally liable for Landlord's obligations or any deficiency under this Lease, and service of process shall not be made against any shareholder, director, officer, employee or agent of Landlord or any of Landlord's affiliates. No partner, shareholder, director, officer, employee, member or agent of Landlord or any of its affiliates shall be sued or named as a party in any suit or action, and service of process shall not be made against any partner or member of Landlord except as may be necessary to secure jurisdiction of the partnership, joint venture or limited liability company, as applicable. No partner, shareholder, director, officer, employee, member or agent of Landlord or any of its affiliates shall be required to answer or otherwise plead to any service of process, and no judgment shall be taken or writ of execution levied against any partner, shareholder, director, officer, employee, member or agent of Landlord or any of its affiliates.

35.3 Each of the covenants and agreements of this Article shall be applicable to any covenant or agreement either expressly contained in this Lease or imposed by Applicable Laws and shall survive the expiration or earlier termination of this Lease.

36. Joint and Several Obligations. If more than one person or entity executes this Lease as Tenant, then:

36.1 Each of them is jointly and severally liable for the keeping, observing and performing of all of the terms, covenants, conditions, provisions and agreements of this Lease to be kept, observed or performed by Tenant, and such terms, covenants, conditions, provisions and agreements shall be binding with the same force and effect upon each and all of the persons executing this Agreement as Tenant; and

36.2 The term "Tenant," as used in this Lease, shall mean and include each of them, jointly and severally. The act of, notice from, notice to, refund to, or signature of any one or more of them with respect to the tenancy under this Lease, including any renewal, extension, expiration, termination or modification of this Lease, shall be binding upon each and all of the persons executing this Lease as Tenant with the same force and effect as if each and all of them had so acted, so given or received such notice or refund, or so signed.

37. Representations. Tenant guarantees, warrants and represents that (a) Tenant is duly incorporated or otherwise established or formed and validly existing under the laws of its state of incorporation, establishment or formation, (b) Tenant has been and is duly qualified to do business in the state in which the Property is located, (c) Tenant has full corporate, partnership, trust, association or other appropriate power and authority to enter into this Lease and to perform all Tenant's obligations hereunder, (d) each person (and all of the persons if more than one signs) signing this Lease on behalf of Tenant is duly and validly authorized to do so and (e) neither (i) the execution, delivery or performance of this Lease nor (ii) the consummation of the transactions contemplated hereby will violate or conflict with any provision of documents or instruments under which Tenant is constituted or to which Tenant is a party. In addition, Tenant guarantees, warrants and represents that none of (x) it, (y) its affiliates or partners nor (z) to the best of its knowledge, its members, shareholders or other equity owners or any of their respective employees, officers, directors, representatives or agents is a person or entity with whom U.S. persons or entities are restricted from doing business under regulations of the Office of Foreign Asset Control ("OFAC") of the Department of the Treasury (including those named on OFAC's Specially Designated and Blocked Persons List) or under any statute, executive order (including the September 24, 2001, Executive Order Blocking Property and Prohibiting Transactions with Persons Who Commit, Threaten to Commit, or Support Terrorism) or other similar governmental action.

38. Confidentiality. Tenant shall keep the terms and conditions of this Lease and any information provided to Tenant or its employees, agents or contractors pursuant to Article 9 confidential and shall not (a) disclose to any third party any terms or conditions of this Lease or any other Lease-related document (including subleases, assignments, work letters, construction contracts, letters of credit, subordination agreements, non-disturbance agreements, brokerage agreements or estoppels) or (b) provide to any third party an original or copy of this Lease (or any Lease-related document). Landlord shall not release to any third party any non-public financial information or non-public information about Tenant's ownership structure that Tenant gives Landlord. Notwithstanding the foregoing, confidential information under this Section may be released by Landlord or Tenant under the following circumstances: (x) if required by Applicable Laws or in any judicial proceeding; provided that the releasing party has given the other party reasonable notice of such requirement, if feasible, (y) to a party's attorneys, accountants, brokers, lenders, potential lenders, potential purchasers and other bona fide consultants or advisers (with respect to this Lease only); provided such third parties agree to be bound by this Section or (z) to bona fide prospective assignees or subtenants of this Lease; provided they agree in writing to be bound by this Section.

39. Notices. Except as otherwise stated in this Lease, any notice, consent, demand, invoice, statement or other communication required or permitted to be given hereunder shall be in writing and shall be given by (a) personal delivery, (b) overnight delivery with a reputable international overnight delivery service, such as FedEx, or (c) facsimile or email transmission, so long as such transmission is followed within one (1) business day by delivery utilizing one of the methods described in Subsection 39(a) or (b). Any such notice, consent, demand, invoice, statement or other communication shall be deemed delivered (x) upon receipt, if given in accordance with Subsection 39(a); (y) one (1) business day after deposit with a reputable international overnight delivery service, if given if given in accordance with Subsection 39(b); or (z) upon transmission, if given in accordance with Subsection 39(c). Except as otherwise stated in this Lease, any notice, consent, demand, invoice, statement or other communication required or permitted to be given pursuant to this Lease shall be addressed to Tenant at the Premises, or to Landlord or Tenant at the addresses shown in Sections 2.9 and 2.10 or 2.11, respectively. Either party may, by notice to the other given pursuant to this Section, specify additional or different addresses for notice purposes.

40. Miscellaneous.

40.1 Landlord reserves the right to change the name of the Building or the Project in its sole discretion.

40.2 To induce Landlord to enter into this Lease, Tenant agrees that it shall promptly furnish to Landlord, from time to time, within ten (10) business days after receipt of Landlord's written request, the most recent year-end unconsolidated financial statements reflecting Tenant's current financial condition audited by a nationally recognized accounting firm. Tenant shall, within ninety (90) days after the end of Tenant's financial year, furnish Landlord with a certified copy of Tenant's year-end unconsolidated financial statements for the previous year audited by a nationally recognized accounting firm. Tenant represents and warrants that all financial statements, records and information furnished by Tenant to Landlord in connection with this Lease are true, correct and complete in all respects. If audited financials are not otherwise prepared, unaudited financials complying with generally accepted accounting principles and certified by the chief financial officer of Tenant as true, correct and complete in all respects shall suffice for purposes of this Section. If Tenant fails to deliver to Landlord any financial statement within the time period required under this Section, then Tenant shall be required to pay to Landlord an administrative fee equal to Five Hundred Dollars (\$500) within five (5) business days after receiving written notice from Landlord advising Tenant of such failure (provided, however, that Landlord's acceptance of such fee shall not prevent Landlord from pursuing any other rights or remedies under this Lease, at law or in equity). The provisions of this Section shall not apply at any time while Tenant is a corporation whose shares are traded on any nationally recognized stock exchange.

40.3 Submission of this instrument for examination or signature by Tenant does not constitute a reservation of or option for a lease, and shall not be effective as a lease or otherwise until execution by and delivery to both Landlord and Tenant.

40.4 The terms of this Lease are intended by the parties as a final, complete and exclusive expression of their agreement with respect to the terms that are included herein, and may not be contradicted or supplemented by evidence of any other prior or contemporaneous agreement.

40.5 Upon the request of either Landlord or Tenant, the parties shall execute a document in recordable form containing only such information as is necessary to constitute a Notice of Lease under Massachusetts law. All costs of preparing and recording such notice shall be borne by the requesting party. Simultaneously with the execution of any Notice of Lease as provided above, Tenant shall execute a recordable termination of such Notice of Lease (the "Lease Termination Notice"), which Lease Termination Notice shall be held in escrow by Landlord and may be released from escrow and recorded by Landlord after the expiration or earlier termination of this Lease. Neither party shall record this Lease.

40.6 Where applicable in this Lease, the singular includes the plural and the masculine or neuter includes the masculine, feminine and neuter. The words “include,” “includes,” “included” and “including” mean “include,” etc., without limitation.” The word “shall” is mandatory and the word “may” is permissive. The section headings of this Lease are not a part of this Lease and shall have no effect upon the construction or interpretation of any part of this Lease. Landlord and Tenant have each participated in the drafting and negotiation of this Lease, and the language in all parts of this Lease shall be in all cases construed as a whole according to its fair meaning and not strictly for or against either Landlord or Tenant.

40.7 Except as otherwise expressly set forth in this Lease, each party shall pay its own costs and expenses incurred in connection with this Lease and such party’s performance under this Lease; provided that, if either party commences an action, proceeding, demand, claim, action, cause of action or suit against the other party arising out of or in connection with this Lease, then the substantially prevailing party shall be reimbursed by the other party for all reasonable costs and expenses, including reasonable attorneys’ fees and expenses, incurred by the substantially prevailing party in such action, proceeding, demand, claim, action, cause of action or suit, and in any appeal in connection therewith (regardless of whether the applicable action, proceeding, demand, claim, action, cause of action, suit or appeal is voluntarily withdrawn or dismissed).

40.8 Time is of the essence with respect to the performance of every provision of this Lease.

40.9 Each provision of this Lease performable by Tenant shall be deemed both a covenant and a condition.

40.10 Notwithstanding anything to the contrary contained in this Lease, Tenant’s obligations under this Lease are independent and shall not be conditioned upon performance by Landlord.

40.11 Whenever consent or approval of either party is required, that party shall not unreasonably withhold, condition or delay such consent or approval, except as may be expressly set forth to the contrary.

40.12 Any provision of this Lease that shall prove to be invalid, void or illegal shall in no way affect, impair or invalidate any other provision hereof, and all other provisions of this Lease shall remain in full force and effect and shall be interpreted as if the invalid, void or illegal provision did not exist.

40.13 Each of the covenants, conditions and agreements herein contained shall inure to the benefit of and shall apply to and be binding upon the parties hereto and their respective heirs; legatees; devisees; executors; administrators; and permitted successors and assigns. This Lease is for the sole benefit of the parties and their respective heirs, legatees, devisees, executors, administrators and permitted successors and assigns, and nothing in this Lease shall give or be construed to give any other person or entity any legal or equitable rights. Nothing in this Section shall in any way alter the provisions of this Lease restricting assignment or subletting.

40.14 This Lease shall be governed by, construed and enforced in accordance with the laws of the state in which the Premises are located, without regard to such state's conflict of law principles.

40.15 Tenant guarantees, warrants and represents that the individual or individuals signing this Lease have the power, authority and legal capacity to sign this Lease on behalf of and to bind all entities, corporations, partnerships, limited liability companies, joint venturers or other organizations and entities on whose behalf such individual or individuals have signed.

40.16 This Lease may be executed in one or more counterparts, each of which, when taken together, shall constitute one and the same document.

40.17 No provision of this Lease may be modified, amended or supplemented except by an agreement in writing signed by Landlord and Tenant.

40.18 No waiver of any term, covenant or condition of this Lease shall be binding upon Landlord unless executed in writing by Landlord. The waiver by Landlord of any breach or default of any term, covenant or condition contained in this Lease shall not be deemed to be a waiver of any preceding or subsequent breach or default of such term, covenant or condition or any other term, covenant or condition of this Lease.

40.19 To the extent permitted by Applicable Laws, the parties waive trial by jury in any action, proceeding or counterclaim brought by the other party hereto related to matters arising out of or in any way connected with this Lease; the relationship between Landlord and Tenant; Tenant's use or occupancy of the Premises; or any claim of injury or damage related to this Lease or the Premises.

41. Rooftop Installation Area.

41.1 Tenant shall have the right, subject to Landlord's prior written approval, to use certain portions of the Building roof in a location designated by Landlord (the "Rooftop Installation Area") solely to operate, maintain, repair and replace rooftop antennae, mechanical equipment, communications antennas and other equipment installed by Tenant in the Rooftop Installation Area in accordance with this Article ("Tenant's Rooftop Equipment"). Tenant's Rooftop Equipment shall be only for Tenant's use of the Premises for the Permitted Use. The parties acknowledge that as of the Execution Date, Tenant does not have any Tenant's Rooftop Equipment requiring the designation of a Rooftop Installation Area.

41.2 Tenant shall install Tenant's Rooftop Equipment at its sole cost and expense, at such times and in such manner as Landlord may reasonably designate, and in accordance with this Article and the applicable provisions of this Lease regarding Alterations. Tenant's Rooftop Equipment and the installation thereof shall be subject to Landlord's prior written approval, which approval shall not be unreasonably withheld. Among other reasons, Landlord may withhold approval if the installation or operation of Tenant's Rooftop Equipment could reasonably be expected to damage the structural integrity of the Building or to transmit vibrations or noise or cause other adverse effects beyond the Premises to an extent not customary in first class laboratory buildings, unless Tenant implements measures that are acceptable to Landlord in its reasonable discretion to avoid any such damage or transmission.

41.3 Tenant shall comply with any roof or roof-related warranties. Tenant shall obtain a letter from Landlord's roofing contractor within thirty (30) days after completion of any Tenant work on the rooftop stating that such work did not affect any such warranties. Tenant, at its sole cost and expense, shall inspect the Rooftop Installation Area at least annually, and correct any loose bolts, fittings or other appurtenances and repair any damage to the roof caused by the installation or operation of Tenant's Rooftop Equipment. Tenant shall not permit the installation, maintenance or operation of Tenant's Rooftop Equipment to violate any Applicable Laws or constitute a nuisance. Tenant shall pay Landlord within thirty (30) days after demand (a) all applicable taxes, charges, fees or impositions imposed on Landlord by Governmental Authorities as the result of Tenant's use of the Rooftop Installation Areas in excess of those for which Landlord would otherwise be responsible for the use or installation of Tenant's Rooftop Equipment and (b) the amount of any increase in Landlord's insurance premiums as a result of the installation of Tenant's Rooftop Equipment. Upon Tenant's written request to Landlord, Landlord shall use commercially reasonable efforts to cause other tenants to remedy any interference in the operation of Tenant's Rooftop Equipment caused by any such tenants' equipment installed after the applicable piece of Tenant's Rooftop Equipment; provided, however, that Landlord shall not be required to request that such tenants waive their rights under their respective leases.

41.4 If Tenant's Equipment (a) causes physical damage to the structural integrity of the Building, (b) interferes with any telecommunications, mechanical or other systems located at or near or servicing the Building or the Project that were installed prior to the installation of Tenant's Rooftop Equipment, (c) interferes with any other service provided to other tenants in the Building or the Project by rooftop or penthouse installations that were installed prior to the installation of Tenant's Rooftop Equipment or (d) interferes with any other tenants' business, in each case in excess of that permissible under Federal Communications Commission regulations, then Tenant shall cooperate with Landlord to determine the source of the damage or interference and promptly repair such damage and eliminate such interference, in each case at Tenant's sole cost and expense, within ten (10) days after receipt of notice of such damage or interference (which notice may be oral; provided that Landlord also delivers to Tenant written notice of such damage or interference within twenty-four (24) hours after providing oral notice).

41.5 Landlord reserves the right to cause Tenant to relocate Tenant's Rooftop Equipment to comparably functional space on the roof or in the penthouse of the Building by giving Tenant prior written notice thereof. Landlord agrees to pay the reasonable costs thereof. Tenant shall arrange for the relocation of Tenant's Rooftop Equipment within sixty (60) days after receipt of Landlord's notification of such relocation. In the event Tenant fails to arrange for relocation within such sixty (60)-day period, Landlord shall have the right to arrange for the relocation of Tenant's Rooftop Equipment in a manner that does not unnecessarily interrupt or interfere with Tenant's use of the Premises for the Permitted Use.

42. Option to Extend Term. Tenant shall have the option ("Option") to extend the Term by three (3) years as to the entire Premises (and no less than the entire Premises) upon the following terms and conditions. The Option is personal to Gritstone Oncology, Inc., and may not be exercised by any party that becomes the tenant under this Lease, unless such party became the tenant as a result of an Exempt Transfer. Any extension of the Term pursuant to the Option shall be on all the same terms and conditions as this Lease, except as follows:

42.1 Base Rent at the commencement of the Option term shall equal the greater of (a) the then-current Base Rent and (b) the then-current fair market value for comparable Class A office and laboratory space in the East Cambridge and Cambridgeport submarket of comparable age, quality, level of finish and proximity to amenities and public transit (“FMV”), and shall be further increased on each annual anniversary of the Option term commencement date by three percent (3%). Tenant may, no more than ten (10) months prior to the date the Term is then scheduled to expire, request Landlord’s estimate of the FMV for the Option term. Landlord shall, within fifteen (15) days after receipt of such request, give Tenant a written proposal of such FMV. If Tenant gives written notice to exercise the Option, such notice shall specify whether Tenant accepts Landlord’s proposed estimate of FMV. If Tenant does not accept the FMV, then the parties shall endeavor to agree upon the FMV, taking into account all relevant factors, including (a) the size of the Premises, (b) the length of the Option term, (c) rent in comparable buildings in the relevant submarket, including concessions offered to new tenants, such as free rent, tenant improvement allowances and moving allowances, (d) Tenant’s creditworthiness, (e) the quality and location of the Building and the Project, (f) the location of the Building in the Cambridgeport sub-submarket and (g) the systems and improvements in the Premises. In the event that the parties are unable to agree upon the FMV within thirty (30) days after Tenant notifies Landlord that Tenant is exercising the Option, then either party may request that the same be determined as follows: a senior officer of a nationally recognized leasing brokerage firm with local knowledge of the East Cambridge and Cambridgeport laboratory/research and development leasing submarket (the “Baseball Arbitrator”) shall be selected and paid for jointly by Landlord and Tenant. If Landlord and Tenant are unable to agree upon the Baseball Arbitrator, then the same shall be designated by the local chapter of the Judicial Arbitration and Mediation Services or any successor organization thereto (the “JAMS”). The Baseball Arbitrator selected by the parties or designated by JAMS shall (y) have at least ten (10) years’ experience in the leasing of laboratory/research and development space in the East Cambridge and Cambridgeport submarket and (z) not have been employed or retained by either Landlord or Tenant or any affiliate of either for a period of at least ten (10) years prior to appointment pursuant hereto. Each of Landlord and Tenant shall submit to the Baseball Arbitrator and to the other party its determination of the FMV. The Baseball Arbitrator shall grant to Landlord and Tenant a hearing and the right to submit evidence. The Baseball Arbitrator shall determine which of the two (2) FMV determinations more closely represents the actual FMV. The arbitrator may not select any other FMV for the Premises other than one submitted by Landlord or Tenant. The FMV selected by the Baseball Arbitrator shall be binding upon Landlord and Tenant and shall serve as the basis for determination of Base Rent payable for the Option term. If, as of the commencement date of the Option term, the amount of Base Rent payable during the Option term shall not have been determined, then, pending such determination, Tenant shall pay Base Rent equal to the Base Rent payable with respect to the last year of the then-current Term. After the final determination of Base Rent payable for the Option term, the parties shall promptly execute a written amendment to this Lease specifying the amount of Base Rent to be paid during the Option term. Any failure of the parties to execute such amendment shall not affect the validity of the FMV determined pursuant to this Section.

42.2 The Option is not assignable separate and apart from this Lease.

42.3 The Option is conditional upon Tenant giving Landlord written notice of its election to exercise the Option at least nine (9) months prior to the end of the expiration of the then-current Term. Time shall be of the essence as to Tenant's exercise of the Option. Tenant assumes full responsibility for maintaining a record of the deadlines to exercise the Option. Tenant acknowledges that it would be inequitable to require Landlord to accept any exercise of the Option after the date provided for in this Section.

42.4 Notwithstanding anything contained in this Article to the contrary, Tenant shall not have the right to exercise the Option:

- (a) During the time commencing from the date Landlord delivers to Tenant a written notice that Tenant is in default under any provisions of this Lease and continuing until Tenant has cured the specified default to Landlord's reasonable satisfaction; or
- (b) At any time after any Default as described in Article 31 of the Lease and continuing until Tenant cures any such Default, if such Default is susceptible to being cured; or
- (c) Tenant has assigned this Lease prior to the exercise of the Option or at the commencement of the Option term (except an assignment that is an Exempt Transfer); or
- (d) Tenant has subleased more than fifty percent (50%) of the Premises as of the exercise of the Option or at the commencement of the Option term (unless such sublease constituted an Exempt Transfer); or
- (e) In the event that Tenant has defaulted in the performance of any monetary obligations or material non-monetary obligations under this Lease two (2) or more times during the twelve (12)-month period immediately prior to the date that Tenant intends to exercise the Option, whether or not Tenant has cured such defaults.

42.5 The period of time within which Tenant may exercise the Option shall not be extended or enlarged by reason of Tenant's inability to exercise such Option because of the provisions of Section 42.4.

42.6 All of Tenant's rights under the provisions of the Option shall terminate and be of no further force or effect even after Tenant's due and timely exercise of the Option if, after such exercise, but prior to the commencement date of the new term, (a) Tenant fails to pay to Landlord a monetary obligation of Tenant for a period of twenty (20) days after written notice from Landlord to Tenant or (b) Tenant fails to commence to cure a default (other than a monetary default) within thirty (30) days after the date Landlord gives notice to Tenant of such default.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have executed this Lease as a sealed Massachusetts instrument as of the date first above written.

LANDLORD:

BMR-SIDNEY RESEARCH CAMPUS LLC, a Delaware limited liability company

By: /s/ William Kane
Name: William Kane
Title: Senior Vice President, Boston Market Lead

TENANT:

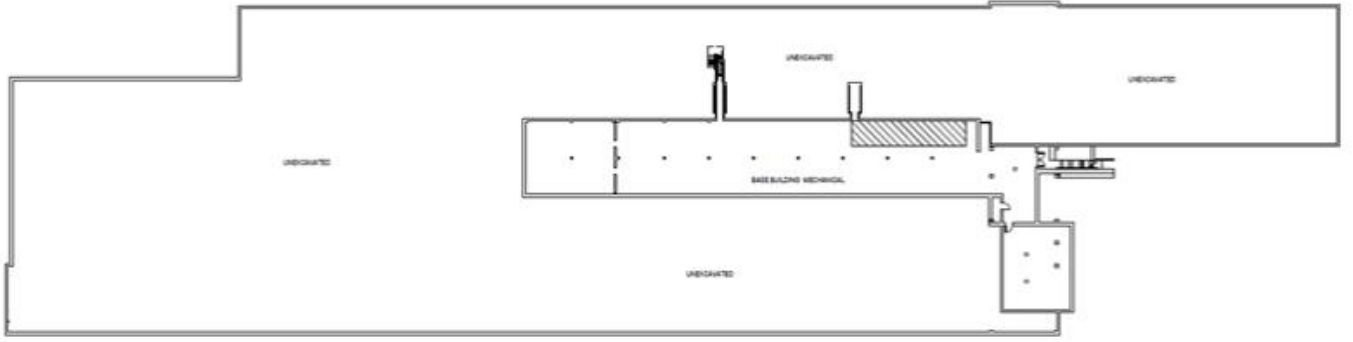
GRITSTONE ONCOLOGY, INC.,
a Delaware corporation

By: /s/ Andrew Allen
Name: Andrew Allen
Title: CEO

EXHIBIT A

PREMISES

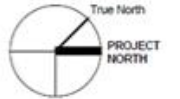
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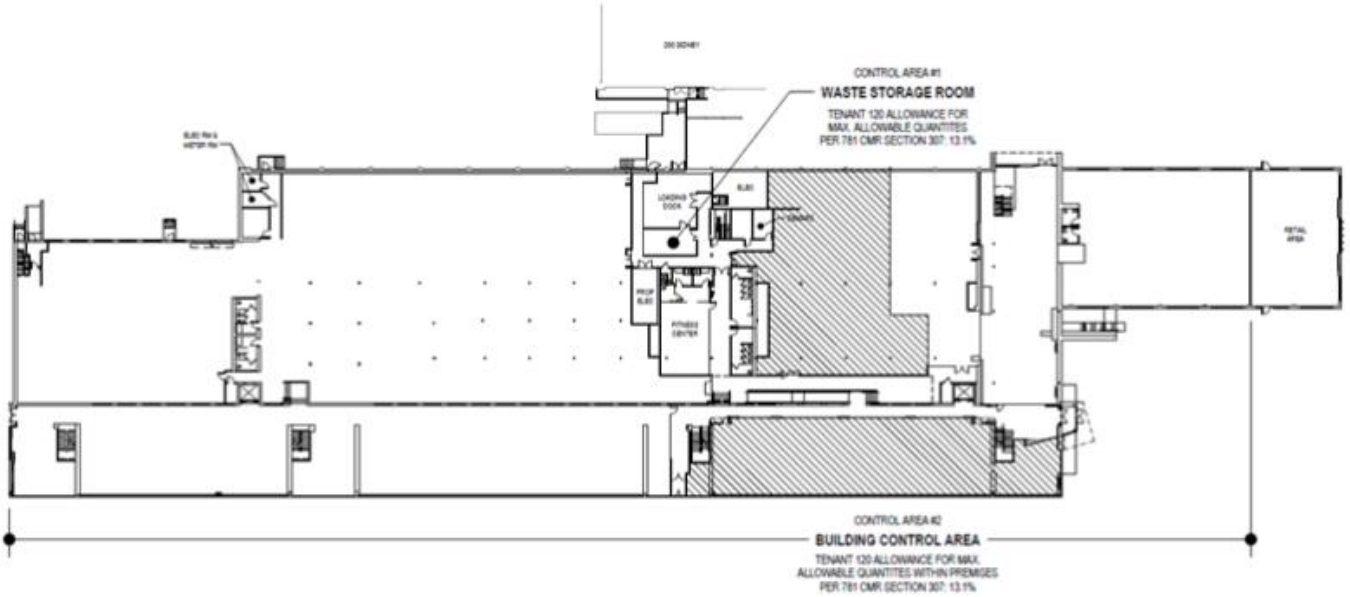
Legend
 APPROPRIATE SCALE 1"=8'-0"
 Tenant Premises

REFER TO FIRST FLOOR PLAN FOR CONTROL AREA INFORMATION

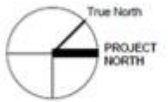
NOTE: USE OR STORAGE OF HAZARDOUS MATERIALS IS PROHIBITED IN THE BASEMENT, SECOND FLOOR AND RETAIL AREA

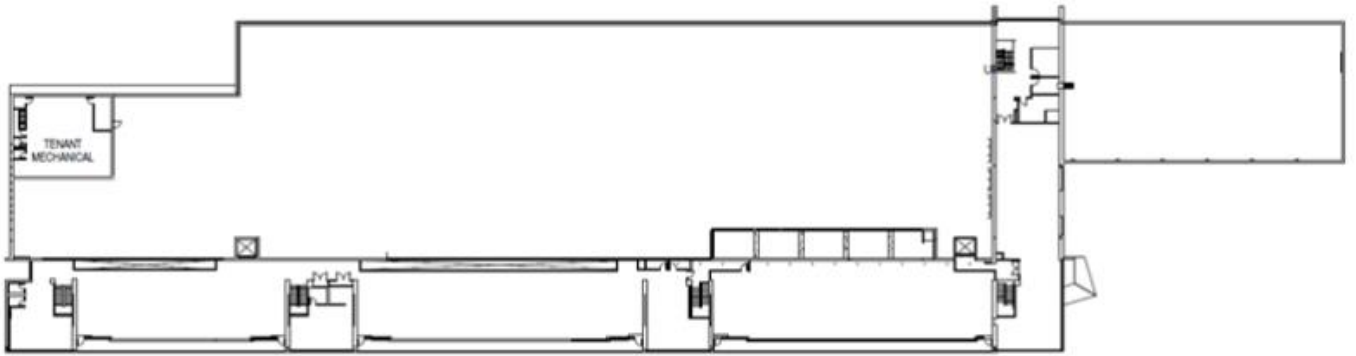


12/17/2015 7:31:07 AM



NOTE: USE OR STORAGE OF HAZARDOUS MATERIALS IS PROHIBITED IN THE BASEMENT, SECOND FLOOR AND RETAIL AREA





Legend
 APPROXIMATE SCALE: 1/4" = 1'-0"
 Tenant Premises

REFER TO FIRST FLOOR PLAN FOR CONTROL AREA INFORMATION.

NOTE: USE OR STORAGE OF HAZARDOUS MATERIALS IS PROHIBITED IN THE BASEMENT, SECOND FLOOR AND RETAIL AREA.

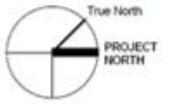


EXHIBIT B

WORK LETTER

This Work Letter (this "Work Letter") is made and entered into as of the 11th day of February, 2016, by and between BMR-SIDNEY RESEARCH CAMPUS LLC, a Delaware limited liability company ("Landlord"), and GRITSTONE ONCOLOGY, INC. a Delaware corporation ("Tenant"), and is attached to and made a part of that certain Lease dated as of February 11, 2016 (as the same may be amended, amended and restated, supplemented or otherwise modified from time to time, the "Lease"), by and between Landlord and Tenant for the Premises located at 40 Erie Street, Cambridge, Massachusetts. All capitalized terms used but not otherwise defined herein shall have the meanings given them in the Lease.

1. General Requirements.

1.1. Authorized Representatives.

(a) Landlord designates, as Landlord's authorized representative ("Landlord's Authorized Representative"), (i) Salvatore Zinno as the person authorized to initial plans, drawings, approvals and to sign change orders pursuant to this Work Letter and (ii) an officer of Landlord as the person authorized to sign any amendments to this Work Letter or the Lease. Tenant shall not be obligated to respond to or act upon any such item until such item has been initialed or signed (as applicable) by the appropriate Landlord's Authorized Representative. Landlord may change either Landlord's Authorized Representative upon one (1) business day's prior written notice to Tenant.

(b) Tenant designates Matt Hawryluk ("Tenant's Authorized Representative") as the person authorized to initial and sign all plans, drawings, change orders and approvals pursuant to this Work Letter. Landlord shall not be obligated to respond to or act upon any such item until such item has been initialed or signed (as applicable) by Tenant's Authorized Representative. Tenant may change Tenant's Authorized Representative upon one (1) business day's prior written notice to Landlord.

1.2. Schedule. The schedule for design and development of the Tenant Improvements, including the time periods for preparation and review of construction documents, approvals and performance, shall be in accordance with the schedule attached hereto as Attachment 1 (the "Schedule"). The Schedule shall be subject to adjustment as mutually agreed upon in writing by the parties, or as otherwise provided in this Work Letter.

1.3. Landlord's Architects, Contractors and Consultants. The architect, engineering consultants, design team, general contractor and subcontractors responsible for the construction of the Tenant Improvements shall be selected by Landlord. Landlord and Tenant acknowledge that the general contractor for the Tenant Improvements will be The Richmond Group.

2. Tenant Improvements. All Tenant Improvements shall be performed by Landlord's contractor, at Tenant's sole cost and expense (subject to Landlord's obligations with respect to any portion of the TI Allowance used by Landlord in completing the Tenant Improvements) and in substantial accordance with the Approved Plans (as defined below), the Lease and this Work

Letter. To the extent that the total projected cost of the Tenant Improvements (as projected by Landlord) exceeds the TI Allowance (such excess, the “Excess TI Costs”), Tenant shall advance to Landlord any Excess TI Costs within ten (10) days after receipt of an invoice therefor. The parties agree that the Excess TI Costs shall be advanced in at least two (2) tranches pursuant to invoices issued by Landlord; the first tranche shall be advanced before Landlord commences the Tenant Improvements, and the second tranche shall be advanced when the Tenant Improvements are approximately 50% complete. The number of tranches and the sum due in each shall be determined by Landlord in Landlord’s sole discretion. If Landlord is delayed in commencing the Tenant Improvements due to Tenant’s failure to timely pay the Excess TI Costs to Landlord, Landlord shall be entitled to a day-for-day extension to achieve Substantial Completion of the Tenant Improvements for the period of such delay. If the actual Excess TI Costs are less than the Excess TI Costs paid by Tenant to Landlord, Landlord shall credit Tenant with the overage paid by Tenant against Tenant’s Rent obligations, beginning after Landlord has completed the final accounting for the Tenant Improvements. If the cost of the Tenant Improvements (as projected by Landlord) increases over Landlord’s initial projection and said increase has not been included in the calculation of the tranches mentioned above, then Landlord may notify Tenant and Tenant shall advance such additional Excess TI Costs within ten (10) days after receipt of an invoice therefor. If Tenant fails to pay, or is late in paying, any sum due to Landlord under this Work Letter, then Landlord shall have all of the rights and remedies set forth in the Lease for nonpayment of Rent (including the right to interest and the right to assess a late charge), and for purposes of any litigation instituted with regard to such amounts the same shall be considered Rent. All material and equipment furnished by Landlord or its contractors as the Tenant Improvements shall be new or “like new,” and the Tenant Improvements shall be performed in a first-class, workmanlike manner.

2.1. Work Plans. The parties agree that the initial schematic plans for the Tenant Improvements are attached as Attachment 2 to this Work Letter (the “Initial Schematic Plans”). Landlord shall prepare and submit to Tenant for approval schematics covering the Tenant Improvements prepared in conformity with the applicable provisions of this Work Letter and which are consistent with and logical evolutions of the Initial Schematic Plans (the “Draft Schematic Plans”). The Draft Schematic Plans shall contain sufficient information and detail to accurately describe the proposed design to Tenant. Tenant shall notify Landlord in writing within five (5) days after receipt of the Draft Schematic Plans whether Tenant approves or objects to the Draft Schematic Plans and of the manner, if any, in which the Draft Schematic Plans are unacceptable. Tenant’s failure to respond within such five (5) day period shall be deemed approval by Tenant. If Tenant reasonably objects to the Draft Schematic Plans, then Landlord shall revise the Draft Schematic Plans and cause Tenant’s objections to be remedied in the revised Draft Schematic Plans. Landlord shall then resubmit the revised Draft Schematic Plans to Tenant for approval, such approval not to be unreasonably withheld, conditioned or delayed. Tenant’s approval of or objection to revised Draft Schematic Plans and Landlord’s correction of the same shall be in accordance with this Section until Tenant has approved the Draft Schematic Plans in writing or been deemed to have approved them. The iteration of the Draft Schematic Plans that is approved or deemed approved by Tenant without objection shall be referred to herein as the “Approved Schematic Plans.” In the event that Draft Schematic Plans are not approved by Tenant in accordance with this Section prior to March 3, 2016, then, notwithstanding anything in the Lease or this Work Letter to the contrary, Landlord shall be entitled to a day-for-day delay for every day after such date until Draft Schematic Plans are approved by Tenant in accordance with this Section.

2.2. Construction Plans. Landlord shall prepare final plans and specifications for the Tenant Improvements that (a) are consistent with and are logical evolutions of the Approved Schematic Plans and (b) incorporate any other Tenant-requested (and Landlord-approved) Changes (as defined below). As soon as such final plans and specifications ("Construction Plans") are completed, Landlord shall deliver the same to Tenant for Tenant's approval, which approval shall not be unreasonably withheld, conditioned or delayed. Such Construction Plans shall be approved or disapproved by Tenant within five (5) days after delivery to Tenant. Tenant's failure to respond within such five (5) day period shall be deemed approval by Tenant. If the Construction Plans are disapproved by Tenant, then Tenant shall notify Landlord in writing of its reasonable objections to such Construction Plans, and the parties shall confer and negotiate in good faith to reach agreement on the Construction Plans. Promptly after the Construction Plans are approved by Landlord and Tenant, two (2) copies of such Construction Plans shall be initialed and dated by Landlord and Tenant, and Landlord shall promptly submit such Construction Plans to all appropriate Governmental Authorities for approval. The Construction Plans so approved, and all change orders specifically permitted by this Work Letter, are referred to herein as the "Approved Plans."

2.3. Changes to the Tenant Improvements. Any changes to the Approved Plans (each, a "Change") shall be requested and instituted in accordance with the provisions of this Article 2 and shall be subject to the written approval of the non-requesting party in accordance with this Work Letter.

(a) Change Request. Either Landlord or Tenant may request Changes after Tenant approves the Approved Plans by notifying the other party thereof in writing in substantially the same form as the AIA standard change order form (a "Change Request"), which Change Request shall detail the nature and extent of any requested Changes, including (a) the Change, (b) the party required to perform the Change and (c) any modification of the Approved Plans and the Schedule, as applicable, necessitated by the Change. If the nature of a Change requires revisions to the Approved Plans, then the requesting party shall be solely responsible for the cost and expense of such revisions and any increases in the cost of the Tenant Improvements as a result of such Change. Change Requests shall be signed by the requesting party's Authorized Representative.

(b) Approval of Changes. All Change Requests shall be subject to the other party's prior written approval, which approval shall not be unreasonably withheld, conditioned or delayed. The non-requesting party shall have five (5) business days after receipt of a Change Request to notify the requesting party in writing of the non-requesting party's decision either to approve or object to the Change Request. The non-requesting party's failure to respond within such five (5) business day period shall be deemed approval by the non-requesting party.

3. Requests for Consent. Except as otherwise provided in this Work Letter, Tenant shall respond to all requests for consents, approvals or directions made by Landlord pursuant to this Work Letter within five (5) days following Tenant's receipt of such request. Tenant's failure to respond within such five (5) day period shall be deemed approval by Tenant.

4. TI Allowance.

4.1. Application of TI Allowance. Landlord shall contribute the Base TI Allowance toward the costs and expenses incurred in connection with the performance of the Tenant Improvements, in accordance with Article 4 of the Lease. If the entire TI Allowance is not applied toward or reserved for the costs of the Tenant Improvements, then Tenant shall not be entitled to a credit of such unused portion of the TI Allowance. If the entire Excess TI Costs advanced by Tenant to Landlord are not applied toward the costs of the Tenant Improvements, then Landlord shall promptly return such excess to Tenant following completion of the Tenant Improvements.

4.2. Approval of Budget for the Tenant Improvements. The parties agree that the initial budget for the Tenant Improvements is attached hereto as Attachment 3 (the "Approved Budget"). Tenant shall promptly reimburse Landlord for costs or expenses relating to the Tenant Improvements that exceed the amount of the TI Allowance.

5. Miscellaneous.

5.1. Incorporation of Lease Provisions. Sections 40.6 through 40.19 of the Lease are incorporated into this Work Letter by reference, and shall apply to this Work Letter in the same way that they apply to the Lease.

5.2. General. Except as otherwise set forth in the Lease or this Work Letter, this Work Letter shall not apply to improvements performed in any additional premises added to the Premises at any time or from time to time, whether by any options under the Lease or otherwise; or to any portion of the Premises or any additions to the Premises in the event of a renewal or extension of the original Term, whether by any options under the Lease or otherwise, unless the Lease or any amendment or supplement to the Lease expressly provides that such additional premises are to be delivered to Tenant in the same condition as the initial Premises.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have executed this Work Letter as a sealed Massachusetts instrument as of the date first above written.

LANDLORD:

BMR-SIDNEY RESEARCH CAMPUS LLC, a Delaware limited liability company

By: /s/ William Kane
Name: William Kane
Title: Senior Vice President, Boston Market Lead

TENANT:

GRITSTONE ONCOLOGY, INC., a Delaware corporation

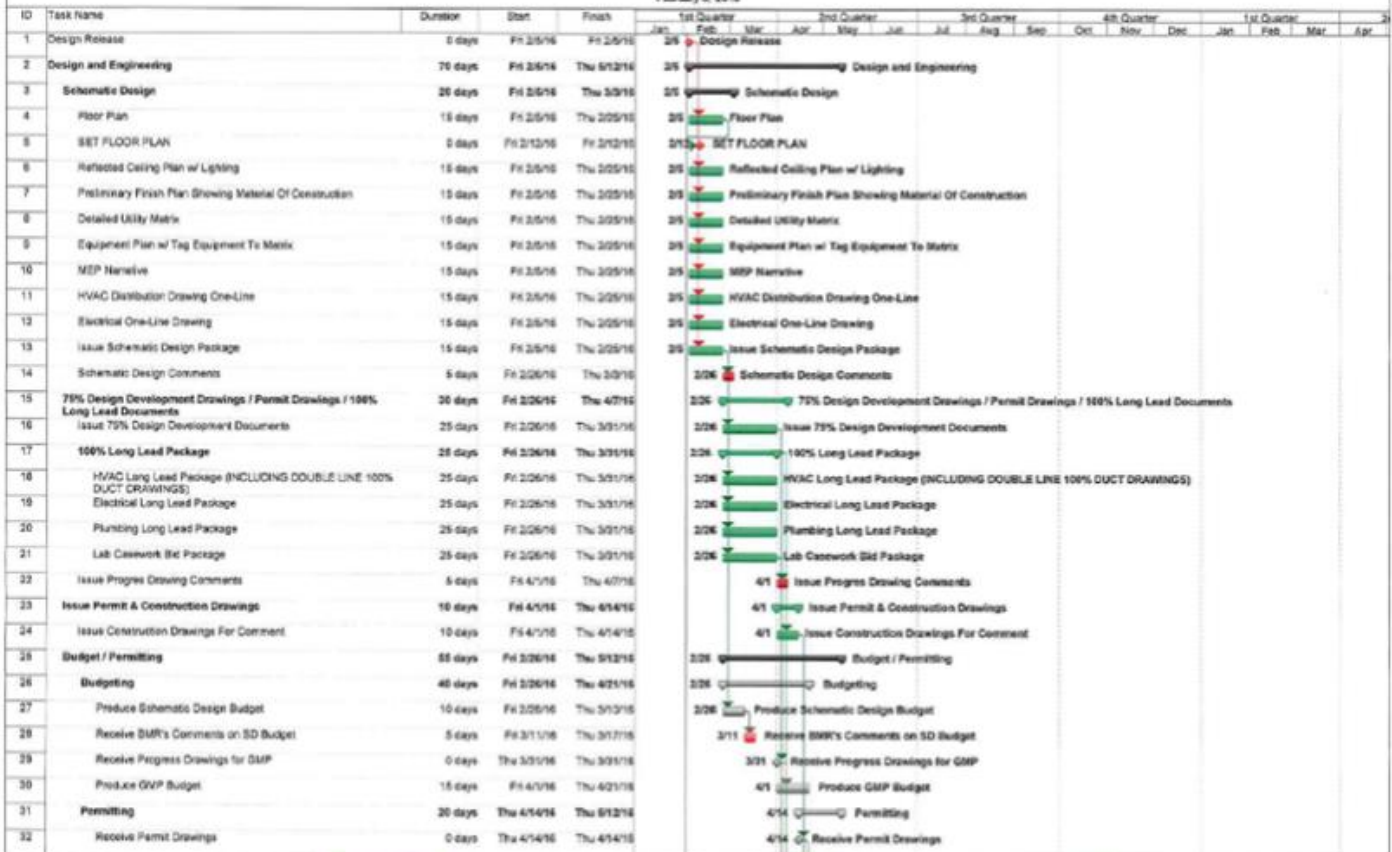
By: /s/ Andrew Allen
Name: Andrew Allen
Title: CEO

Attachment 1 to Work Letter

Schedule

[See attached]

Preliminary Project Schedule
 Gristone
 February 3, 2016



Project: Gristone Schedule 2.3.16 Date: Wed 2/3/16	Task		Roll Up Progress		Inactive Task		Duration-only		Progress
	Milestone		Split		Inactive Milestone		Manual Summary Rollup		Deadline
	Summary		External Tasks		Inactive Summary		Manual Summary		
	Roll Up Task		Project Summary		Inactive Task		Start-only		C
	Roll Up Milestone		Group By Summary		Manual Task		Finish-only		C

Preliminary Project Schedule
Gritstone
February 5, 2016

ID	Task Name	Duration	Start	Finish	1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter		
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
65	Ceiling Grid	4 days	Fri 7/22/16	Wed 7/27/16								7/22							
66	Lab Casework Delivery	0 days	Thu 8/11/16	Thu 8/11/16									8/11						
67	Lab Casework Installation	15 days	Fri 8/12/16	Thu 8/11/16									8/12						
68	Milwork Delivery	0 days	Thu 8/25/16	Thu 8/25/16									8/25						
69	Milwork Installation	15 days	Fri 8/25/16	Thu 9/15/16									8/25						
70	Door & Hardware Delivery	0 days	Thu 8/19/16	Thu 8/19/16									8/19						
71	Door and Hardware Installation	15 days	Fri 8/19/16	Thu 9/9/16									8/19						
72	Glazing	15 days	Fri 8/19/16	Thu 9/9/16									8/19						
73	Specialty Installation	15 days	Fri 8/19/16	Thu 9/9/16									8/19						
74	Sprinkler Heads	20 days	Tue 7/26/16	Mon 8/22/16									7/26						
75	Finish HVAC	25 days	Wed 8/3/16	Tue 9/6/16									8/3						
76	Finish HVAC	25 days	Wed 8/3/16	Tue 9/6/16									8/3						
77	VAV Box Delivery	0 days	Fri 8/5/16	Fri 8/5/16									8/5						
78	RGD's and misc HVAC Delivery	0 days	Thu 8/11/16	Thu 8/11/16									8/11						
79	HVAC Controls	20 days	Wed 8/10/16	Tue 9/6/16									8/10						
80	Finish Plumbing	30 days	Thu 7/21/16	Thu 8/11/16									7/21						
81	Finish plumbing	25 days	Fri 7/29/16	Thu 8/11/16									7/29						
82	Emergency Shower / Sink / Fixture Delivery	0 days	Thu 7/21/16	Thu 7/21/16									7/21						
83	Finish Electrical	25 days	Thu 7/28/16	Wed 8/31/16									7/28						
84	Finish Electrical	25 days	Thu 7/28/16	Wed 8/31/16									7/28						
85	Lighting Delivery	0 days	Thu 8/4/16	Thu 8/4/16									8/4						
86	Specialty Electrical Items	0 days	Thu 8/4/16	Thu 8/4/16									8/4						
87	Painting	20 days	Wed 8/10/16	Tue 8/9/16									8/10						
88	Ceiling Tile	6 days	Wed 8/3/16	Fri 8/5/16									8/3						
89	Flooring	10 days	Tue 8/8/16	Mon 8/15/16									8/8						
90	Final Clean-up	5 days	Tue 9/20/16	Mon 9/20/16									9/20						
91	Final inspections	5 days	Tue 9/20/16	Mon 9/20/16									9/20						
92	Obtain Certificate of Occupancy	5 days	Tue 9/27/16	Mon 10/3/16									9/27						
93	Occupancy	0 days	Mon 10/3/16	Mon 10/3/16									10/3						

Project: Gritstone Schedule 2.3.16 Date: Wed 2/3/16	Task		Roll Up Progress		Inactive Task		Duration-only		Progress	
	Milestone		Split		Inactive Task		Manual Summary Rollup		Deadline	
	Summary		External Tasks		Inactive Milestone		Manual Summary			
	Roll Up Task		Project Summary		Inactive Summary		Start-only			
	Roll Up Milestone		Group By Summary		Manual Task		Finish-only			

Attachment 2 to Work Letter

Initial Schematic Plans

[See attached]

Attachment 3 to Work Letter

Budget

[See attached]

GRITSTONE TI BUDGET				40 ERIE STREET
RSF				
Premises			13,907	
TI ALLOWANCE				
Base LLW/TI Allowance	\$	150.00 /SF	\$	2,086,050.00 (\$150/Rsf)
DETAILED CONSTRUCTION BUDGET				
Design Fee's	\$	14.62 /SF	\$	203,260.00 <i>AST proposal dated 11/16/15 reduced by \$30K per discussion with PO</i>
A/E Reimbursables	\$	0.48 /SF	\$	6,700.00 <i>Allowance</i>
Other Consultants	\$	- /SF	\$	- <i>Str. and lighting inc. in AST prop. Accounted excluded.</i>
Commissioning	\$	0.93 /SF	\$	13,000.00 <i>Allowance</i>
Insurance	\$	- /SF	\$	- <i>Gen. liability included in CM proposal, builder's risk excluded</i>
Bond	\$	- /SF	\$	- <i>Excluded</i>
Building Permit	\$	- /SF	\$	- <i>Included in CM proposal</i>
Misc. Soft Costs	\$	- /SF	\$	- <i>Excluded</i>
Soft Cost Contingency	\$	0.75 /SF	\$	10,488.00 <i>5% of design fees and A/E reimbursables</i>
Project Management Fee	\$	6.49 /SF	\$	90,315.83 <i>3% of total TI costs</i>
Total Soft Costs	\$	23.28 /SF	\$	323,773.83
CM Proposal	\$	192.43 /SF	\$	2,676,184.00 <i>TI&G budget dated 2/2/16 (includes add'l/ltr 1-3 & 5)</i>
VE's	\$	- /SF	\$	-
CM Contingency	\$	- /SF	\$	- <i>Included in CM proposal</i>
FF&E	\$	- /SF	\$	- <i>Excluded</i>
Security	\$	1.44 /SF	\$	20,000.00 <i>Allowance</i>
Tel/data	\$	- /SF	\$	- <i>Excluded</i>
Furniture	\$	- /SF	\$	- <i>Excluded</i>
Other	\$	- /SF	\$	- <i>Excluded</i>
Hard Cost Contingency	\$	3.82 /SF	\$	80,885.52 <i>3% of hard costs</i>
Total Hard Costs	\$	199.69 /SF	\$	2,777,069.52
BUDGET SUMMARY				
Total Soft Costs	\$	23.28 /SF	\$	323,773.83
Total Hard Costs	\$	199.69 /SF	\$	2,777,069.52
Total	\$	222.97 /SF	\$	3,100,843.35
Cost Above LLW/TI Allowance	\$	72.97 /SF	\$	1,014,793.35

EXHIBIT B-1

TENANT WORK INSURANCE SCHEDULE

Tenant shall be responsible for requiring all of Tenant contractors doing construction or renovation work to purchase and maintain such insurance as shall protect it from the claims set forth below which may arise out of or result from any Tenant Work whether such Tenant Work is completed by Tenant or by any Tenant contractors or by any person directly or indirectly employed by Tenant or any Tenant contractors, or by any person for whose acts Tenant or any Tenant contractors may be liable:

1. Claims under workers' compensation, disability benefit and other similar employee benefit acts which are applicable to the Tenant Work to be performed.
2. Claims for damages because of bodily injury, occupational sickness or disease, or death of employees under any applicable employer's liability law.
3. Claims for damages because of bodily injury, or death of any person other than Tenant's or any Tenant contractors' employees.
4. Claims for damages insured by usual personal injury liability coverage which are sustained (a) by any person as a result of an offense directly or indirectly related to the employment of such person by Tenant or any Tenant contractors or (b) by any other person.
5. Claims for damages, other than to the Tenant Work itself, because of injury to or destruction of tangible property, including loss of use therefrom.
6. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

Tenant contractors' Commercial General Liability Insurance shall include premises/operations (including explosion, collapse and underground coverage if such Tenant Work involves any underground work), elevators, independent contractors, products and completed operations, and blanket contractual liability on all written contracts, all including broad form property damage coverage.

Tenant contractors' Commercial General, Automobile, Employers and Umbrella Liability Insurance shall be written for not less than limits of liability as follows:

- | | |
|-----------------------------------|---|
| a. Commercial General Liability: | Commercially reasonable amounts, but in any event no less than |
| Bodily Injury and Property Damage | \$1,000,000 per occurrence and \$2,000,000 general aggregate, with \$2,000,000 products and completed operations aggregate. |

b. Commercial Automobile Liability:	\$1,000,000 per accident
Bodily Injury and Property Damage	
c. Employer's Liability:	
Each Accident	\$500,000
Disease — Policy Limit	\$500,000
Disease — Each Employee	\$500,000
d. Umbrella Liability:	Commercially reasonable amounts (excess of coverages a, b and c above), but
Bodily Injury and Property Damage	in any event no less than \$5,000,000 per occurrence / aggregate.

All subcontractors for Tenant contractors shall carry the same coverages and limits as specified above, unless different limits are reasonably approved by Landlord. The foregoing policies shall contain a provision that coverages afforded under the policies shall not be canceled or not renewed until at least thirty (30) days' prior written notice has been given to the Landlord. Certificates of insurance including required endorsements showing such coverages to be in force shall be filed with Landlord prior to the commencement of any Tenant Work and prior to each renewal. Coverage for completed operations must be maintained for the lesser of ten (10) years and the applicable statute of repose following completion of the Tenant Work, and certificates evidencing this coverage must be provided to Landlord. The minimum A.M. Best's rating of each insurer shall be A- VII. Landlord and its mortgagees shall be named as an additional insureds under Tenant contractors' Commercial General Liability, Commercial Automobile Liability and Umbrella Liability Insurance policies as respects liability arising from work or operations performed, or ownership, maintenance or use of autos, by or on behalf of such contractors. Each contractor and its insurers shall provide waivers of subrogation with respect to any claims covered or that should have been covered by valid and collectible insurance, including any deductibles or self-insurance maintained thereunder.

If any contractor's work involves the handling or removal of asbestos (as determined by Landlord in its sole and absolute discretion), such contractor shall also carry Pollution Legal Liability insurance. Such coverage shall include bodily injury, sickness, disease, death or mental anguish or shock sustained by any person; property damage, including physical injury to or destruction of tangible property (including the resulting loss of use thereof), clean-up costs and the loss of use of tangible property that has not been physically injured or destroyed; and defense costs, charges and expenses incurred in the investigation, adjustment or defense of claims for such damages. Coverage shall apply to both sudden and non-sudden pollution conditions including the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants into or upon land, the atmosphere or any watercourse or body of water. Claims-made coverage is permitted, provided the policy retroactive date is continuously maintained prior to the Term Commencement Date, and coverage is continuously maintained during all periods in which Tenant occupies the Premises. Coverage shall be maintained with limits of not less than \$1,000,000 per incident with a \$2,000,000 policy aggregate.

EXHIBIT B-2

LANDLORD'S WORK

1) Architectural

- a) Exterior
 - i) New canopy and entry vestibule at main entrance.
 - ii) Improvements to Waverly and Erie Street facades.
 - iii) Landscape improvements at the corner of Waverly and Erie Streets.
- b) Interior
 - i) New main lobby at Erie Street entrance. Includes all finishes.
 - ii) New common restrooms, janitor's closet, waste storage room, fitness center, and two (2) shower rooms at core area adjacent to northern-most loading dock.
 - iii) Upgrade common stairs.
 - iv) Refurbish interior of elevator No. 1 (northern-most elevator). Improvements to elevator No. 2 excluded.
 - v) Tenant demising from common areas or other tenant spaces excluded.
 - vi) Remaining core and shell components to remain as is.

2) Structural

- a) As required to facilitate the scope of worked outlined in this document.

3) Fire Protection

- a) Install new distribution mains up to zone valves.
- b) Branch lines excluded

4) Plumbing

- a) Existing plumbing systems will remain with the following exceptions:
 - i) Refurbish existing lab waste treatment system to serve the entire building.
 - ii) Provide shared reverse osmosis, compressed air, tempered water, and VAC systems. Distribution excluded.

5) HVAC

- a) Two (2) new shared fifty thousand (50,000) CFM AHU's
- b) Hot water (HW) system including new boilers and flus.
- c) Chilled water (CHW) system including 900 ton chiller and cooling tower
- d) Tenant specific FCU's, HW distribution, and CHW distribution excluded.
- e) New one-hundred thousand (100,000) CFM energy recover unit.
- f) Ductwork excluded.

6) **Electrical**

- a) Main switchgear to remain.
- b) Distribution from main switchgear excluded.
- c) Common area and exterior lighting.
- d) Tel/data and security excluded.
- e) Provide a new rooftop 650 KW gas fired generator with automatic transfer switch for base building equipment. 315 kW available for tenant use. Tenant specific transfer switches excluded.

B-2-2

EXHIBIT C

ACKNOWLEDGEMENT OF TERM COMMENCEMENT DATE

AND TERM EXPIRATION DATE

THIS ACKNOWLEDGEMENT OF TERM COMMENCEMENT DATE AND TERM EXPIRATION DATE is entered into as of [], 20[], with reference to that certain Lease (the "Lease") dated as of [], 2015, by Gritstone Oncology, Inc., a Delaware corporation ("Tenant"), in favor of BMR-Sidney Research Campus LLC, a Delaware limited liability company ("Landlord"). All capitalized terms used herein without definition shall have the meanings ascribed to them in the Lease.

Tenant hereby confirms the following:

- 1. [Tenant accepted possession of the Premises for use in accordance with the Permitted Use on [], 20[]. Tenant first occupied the Premises for the Permitted Use on [], 20[].]
2. The Premises are in good order, condition and repair.
3. The Tenant Improvements are Substantially Complete.
4. All conditions of the Lease to be performed by Landlord as a condition to the full effectiveness of the Lease have been satisfied, and Landlord has fulfilled all of its duties in the nature of inducements offered to Tenant to lease the Premises.
5. In accordance with the provisions of Article 4 of the Lease, the Term Commencement Date is [], 20[], and, unless the Lease is terminated prior to the Term Expiration Date pursuant to its terms, the Term Expiration Date shall be [], 20[].
6. The Lease is in full force and effect, and the same represents the entire agreement between Landlord and Tenant concerning the Premises.
7. Tenant has no existing defenses against the enforcement of the Lease by Landlord, and there exist no offsets or credits against Rent owed or to be owed by Tenant.
8. The obligation to pay Rent is presently in effect and all Rent obligations on the part of Tenant under the Lease commenced to accrue on [], 20[], with Base Rent payable on the dates and amounts set forth in the chart below:

Table with 5 columns: Dates, Approximate Square Feet of Rentable Area, Base Rent per Square Foot of Rentable Area, Monthly Base Rent, Annual Base Rent. Row 1: []/[]-[]/[]/[], [], \$ [], \$ [], \$ []

9. The undersigned Tenant has not made any prior assignment, transfer, hypothecation or pledge of the Lease or of the rents thereunder or sublease of the Premises or any portion thereof.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, Tenant has executed this Acknowledgment of Term Commencement Date and Term Expiration Date as of the date first written above.

TENANT:

GRITSTONE ONCOLOGY, INC., a Delaware corporation

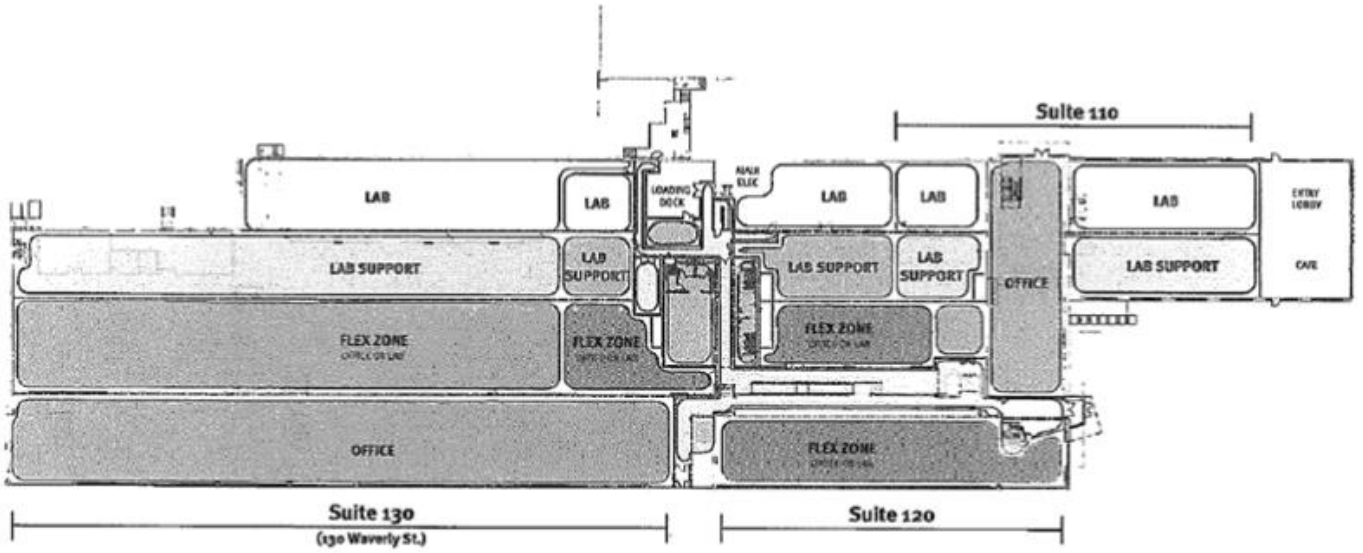
By: _____
Name: _____
Title: _____

EXHIBIT D

PLAN OF PREMISES LAYOUT ZONE

[See attached]

D-1



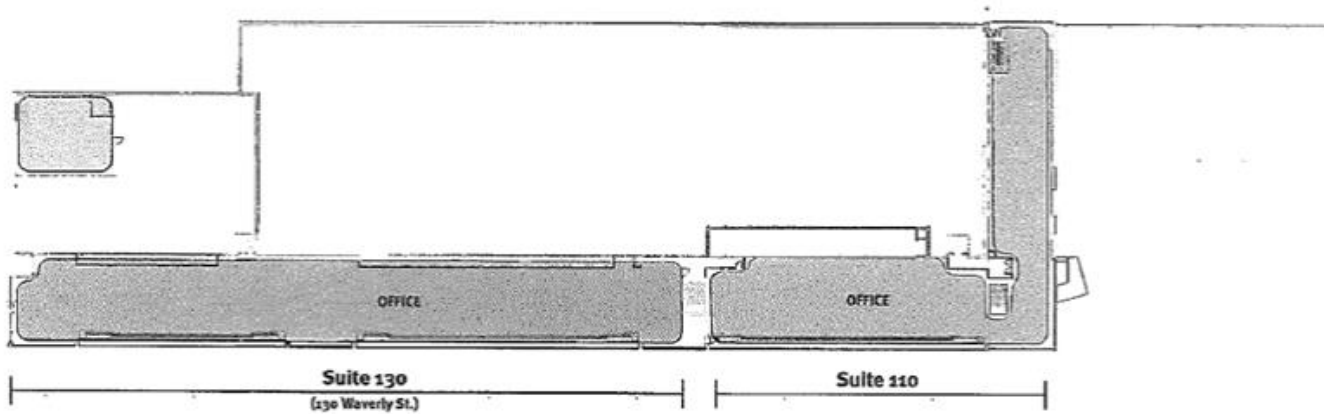


EXHIBIT E

FORM OF LETTER OF CREDIT

[On letterhead or L/C letterhead of Issuer]

LETTER OF CREDIT

Date: _____, 20____

_____(the "Beneficiary")

Attention: _____

L/C. No.: _____

Loan No.: _____

Ladies and Gentlemen:

We establish in favor of Beneficiary our irrevocable and unconditional Letter of Credit numbered as identified above (the "L/C") for an aggregate amount of \$ _____, expiring at _____:00 p.m. on or, if such day is not a Banking Day, then the next succeeding Banking Day (such date, as extended from time to time, the "Expiry Date"). "Banking Day" means a weekday except a weekday when commercial banks in _____ are authorized or required to close.

We authorize Beneficiary to draw on us (the "Issuer") for the account of _____ (the "Account Party"), under the terms and conditions of this L/C.

Funds under this L/C are available by presenting the following documentation (the "Drawing Documentation"): (a) the original L/C and (b) a sight draft substantially in the form of Attachment 1, with blanks filled in and bracketed items provided as appropriate. No other evidence of authority, certificate, or documentation is required.

Drawing Documentation must be presented at Issuer's office at _____ on or before the Expiry Date by personal presentation, courier or messenger service, or fax. Presentation by fax shall be effective upon electronic confirmation of transmission as evidenced by a printed report from the sender's fax machine. After any fax presentation, but not as a condition to its effectiveness, Beneficiary shall with reasonable promptness deliver the original Drawing Documentation by any other means. Issuer will on request issue a receipt for Drawing Documentation.

We agree, irrevocably, and irrespective of any claim by any other person, to honor drafts drawn under and in conformity with this L/C, within the maximum amount of this L/C, presented to us on or before the Expiry Date, provided we also receive (on or before the Expiry Date) any other Drawing Documentation this L/C requires.

We shall pay this L/C only from our own funds by check or wire transfer, in compliance with the Drawing Documentation.

If Beneficiary presents proper Drawing Documentation to us on or before the Expiry Date, then we shall pay under this L/C at or before the following time (the "Payment Deadline"): (a) if presentment is made at or before noon of any Banking Day, then the close of such Banking Day; and (b) otherwise, the close of the next Banking Day. We waive any right to delay payment beyond the Payment Deadline. If we determine that Drawing Documentation is not proper, then we shall so advise Beneficiary in writing, specifying all grounds for our determination, within one Banking Day after the Payment Deadline.

Partial drawings are permitted. This L/C shall, except to the extent reduced thereby, survive any partial drawings.

We shall have no duty or right to inquire into the validity of or basis for any draw under this L/C or any Drawing Documentation. We waive any defense based on fraud or any claim of fraud.

The Expiry Date shall automatically be extended by one year (but never beyond (the "Outside Date")) unless, on or before the date 90 days before any Expiry Date, we have given Beneficiary notice that the Expiry Date shall not be so extended (a "Nonrenewal Notice"). We shall promptly upon request confirm any extension of the Expiry Date under the preceding sentence by issuing an amendment to this L/C, but such an amendment is not required for the extension to be effective. We need not give any notice of the Outside Date.

Beneficiary may from time to time without charge transfer this L/C, in whole but not in part, to any transferee (the "Transferee"). Issuer shall look solely to Account Party for payment of any fee for any transfer of this L/C. Such payment is not a condition to any such transfer. Beneficiary or Transferee shall consummate such transfer by delivering to Issuer the original of this L/C and a Transfer Notice substantially in the form of Attachment 2, purportedly signed by Beneficiary, and designating Transferee. Issuer shall promptly reissue or amend this L/C in favor of Transferee as Beneficiary. Upon any transfer, all references to Beneficiary shall automatically refer to Transferee, who may then exercise all rights of Beneficiary. Issuer expressly consents to any transfers made from time to time in compliance with this paragraph.

Any notice to Beneficiary shall be in writing and delivered by hand with receipt acknowledged or by overnight delivery service such as FedEx (with proof of delivery) at the above address, or such other address as Beneficiary may specify by written notice to Issuer. A copy of any such notice shall also be delivered, as a condition to the effectiveness of such notice, to: (or such replacement as Beneficiary designates from time to time by written notice).

No amendment that adversely affects Beneficiary shall be effective without Beneficiary's written consent.

This L/C is subject to and incorporates by reference: (a) the International Standby Practices 98 ("ISP 98"); and (b) to the extent not inconsistent with ISP 98, Article 5 of the Uniform Commercial Code of the State of New York.

Very truly yours,

[Issuer Signature]

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ATTACHMENT 1 TO EXHIBIT E

FORM OF SIGHT DRAFT

[BENEFICIARY LETTERHEAD]

TO:

[Name and Address of Issuer]

SIGHT DRAFT

AT SIGHT, pay to the Order of _____, the sum of _____ United States Dollars (\$ _____). Drawn under [Issuer] Letter of Credit No. _____ dated _____.

[Issuer is hereby directed to pay the proceeds of this Sight Draft solely to the following account: _____.]

[Name and signature block, with signature or purported signature of Beneficiary]

Date: _____

ATTACHMENT 2 TO EXHIBIT E

FORM OF TRANSFER NOTICE

[BENEFICIARY LETTERHEAD]

TO:

[Name and Address of Issuer] (the "Issuer")

TRANSFER NOTICE

By signing below, the undersigned, Beneficiary (the "Beneficiary") under Issuer's Letter of Credit No. _____ dated _____ (the "L/C"), transfers the L/C to the following transferee (the "Transferee"): _____

[Transferee Name and Address]

The original L/C is enclosed. Beneficiary directs Issuer to reissue or amend the L/C in favor of Transferee as Beneficiary. Beneficiary represents and warrants that Beneficiary has not transferred, assigned, or encumbered the L/C or any interest in the L/C, which transfer, assignment, or encumbrance remains in effect.

[Name and signature block, with signature or purported signature of Beneficiary]

Date: _____]

EXHIBIT F

Intentionally Omitted

F-1

EXHIBIT G

RULES AND REGULATIONS

NOTHING IN THESE RULES AND REGULATIONS (“RULES AND REGULATIONS”) SHALL SUPPLANT ANY PROVISION OF THE LEASE. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN THESE RULES AND REGULATIONS AND THE LEASE, THE LEASE SHALL PREVAIL.

1. No Tenant Party shall encumber or obstruct the common entrances, lobbies, elevators, sidewalks and stairways of the Building(s) or the Project or use them for any purposes other than ingress or egress to and from the Building(s) or the Project.
2. Except as specifically provided in the Lease, no sign, placard, picture, advertisement, name or notice shall be installed or displayed on any part of the outside of the Premises or the Building(s) without Landlord’s prior written consent. Landlord shall have the right to remove, at Tenant’s sole cost and expense and without notice, any sign installed or displayed in violation of this rule.
3. If Landlord objects in writing to any curtains, blinds, shades, screens, hanging plants or other similar objects attached to or used in connection with any window or door of the Premises or placed on any windowsill, and (a) such window, door or windowsill is visible from the exterior of the Premises and (b) such curtain, blind, shade, screen, hanging plant or other object is not included in plans approved by Landlord, then Tenant shall promptly remove such curtains, blinds, shades, screens, hanging plants or other similar objects at its sole cost and expense.
4. Deliveries shall be made no earlier than 7 a.m. or later than 6 p.m. No deliveries shall be made that impede or interfere with other tenants in or the operation of the Project. Movement of furniture, office equipment or any other large or bulky material(s) through the Common Area shall be restricted to such hours as Landlord may designate and shall be subject to reasonable restrictions that Landlord may impose. A temporary loading permit is required for all temporary parking and such permit, which permit Landlord may provide in its sole and absolute discretion.
5. Tenant shall not place a load upon any floor of the Premises that exceeds the load per square foot that (a) such floor was designed to carry or (b) is allowed by Applicable Laws. Fixtures and equipment that cause noises or vibrations that may be transmitted to the structure of the Building(s) to such a degree as to be objectionable to other tenants shall be placed and maintained by Tenant, at Tenant’s sole cost and expense, on vibration eliminators or other devices sufficient to eliminate such noises and vibrations to levels reasonably acceptable to Landlord and the affected tenants of the Project.
6. Tenant shall not use any method of HVAC other than that approved in writing by Landlord.
7. Tenant shall not install any radio, television or other antennae; cell or other communications equipment; or other devices on the roof or exterior walls of the Premises except in accordance with the Lease. Tenant shall not interfere with radio, television or other digital or electronic communications at the Project or elsewhere.

8. Canvassing, peddling, soliciting and distributing handbills or any other written material within, on or around the Project (other than within the Premises) are prohibited. Tenant shall cooperate with Landlord to prevent such activities by any Tenant Party.
9. Tenant shall store all of its trash, garbage and Hazardous Materials in receptacles within its Premises or in receptacles designated by Landlord outside of the Premises. Tenant shall not place in any such receptacle any material that cannot be disposed of in the ordinary and customary manner of trash, garbage and Hazardous Materials disposal. Any Hazardous Materials transported through Common Area shall be held in secondary containment devices. Tenant shall be responsible, at its sole cost and expense, for Tenant's removal of its trash, garbage and Hazardous Materials. Tenant is encouraged to participate in the waste removal and recycling program in place at the Project.
10. The Premises shall not be used for lodging or for any improper, immoral or objectionable purpose. No cooking shall be done or permitted in the Premises; provided, however, that Tenant may use (a) equipment approved in accordance with the requirements of insurance policies that Landlord or Tenant is required to purchase and maintain pursuant to the Lease for brewing coffee, tea, hot chocolate and similar beverages, (b) microwave ovens for employees' use and (c) equipment shown on plans approved by Landlord; provided, further, that any such equipment and microwave ovens are used in accordance with Applicable Laws.
11. Tenant shall not, without Landlord's prior written consent, use the name of the Project, if any, in connection with or in promoting or advertising Tenant's business except as Tenant's address.
12. Tenant shall comply with all safety, fire protection and evacuation procedures and regulations established by Landlord or any Governmental Authority.
13. Tenant assumes any and all responsibility for protecting the Premises from theft, robbery and pilferage, which responsibility includes keeping doors locked and other means of entry to the Premises closed.
14. Tenant shall not modify any locks to the Premises without Landlord's prior written consent, which consent Landlord shall not unreasonably withhold, condition or delay. Tenant shall furnish Landlord with copies of keys, pass cards or similar devices for locks to the Premises.
15. Tenant shall cooperate and participate in all reasonable security programs affecting the Premises.
16. Tenant shall not permit any animals in the Project, other than for guide animals or for use in laboratory experiments.
17. Bicycles shall not be taken into the Building(s) (including the elevators and stairways of the Building) except into areas designated by Landlord.

18. The water and wash closets and other plumbing fixtures shall not be used for any purposes other than those for which they were constructed, and no sweepings, rubbish, rags or other substances shall be deposited therein.
19. Discharge of industrial sewage shall only be permitted if Tenant, at its sole expense, first obtains all necessary permits and licenses therefor from all applicable Governmental Authorities.
20. Smoking is prohibited inside the Building, except in designated outdoor areas of the Project (if any).
21. The Project's hours of operation are currently 24 hours per day, seven (7) days per week.
22. Tenant shall comply with all orders, requirements and conditions now or hereafter imposed by Applicable Laws or Landlord ("Waste Regulations") regarding the collection, sorting, separation and recycling of waste products, garbage, refuse and trash generated by Tenant (collectively, "Waste Products"), including (without limitation) the separation of Waste Products into receptacles reasonably approved by Landlord and the removal of such receptacles in accordance with any collection schedules prescribed by Waste Regulations.
23. Tenant, at Tenant's sole cost and expense, shall cause the Premises to be exterminated on a monthly basis to Landlord's reasonable satisfaction and shall cause all portions of the Premises used for the storage, preparation, service or consumption of food or beverages to be cleaned daily in a manner reasonably satisfactory to Landlord, and to be treated against infestation by insects, rodents and other vermin and pests whenever there is evidence of any infestation. Tenant shall not permit any person to enter the Premises or the Project for the purpose of providing such extermination services, unless such persons have been approved by Landlord. If requested by Landlord, Tenant shall, at Tenant's sole cost and expense, store any refuse generated in the Premises by the consumption of food or beverages in a cold box or similar facility.
24. If Tenant desires to use any portion of the Common Area for a Tenant-related event, Tenant must notify Landlord in writing at least thirty (30) days prior to such event on the form attached as Attachment 1 to this Exhibit, which use shall be subject to Landlord's prior written consent, not to be unreasonably withheld, conditioned or delayed. Notwithstanding anything in this Lease or the completed and executed Attachment to the contrary, Tenant shall be solely responsible for setting up and taking down any equipment or other materials required for the event, and shall promptly pick up any litter and report any property damage to Landlord related to the event. Any use of the Common Area pursuant to this Section shall be subject to the provisions of Article 28 of the Lease.

Landlord may waive any one or more of these Rules and Regulations for the benefit of Tenant or any other tenant, but no such waiver by Landlord shall be construed as a waiver of such Rules and Regulations in favor of Tenant or any other tenant, nor prevent Landlord from thereafter enforcing any such Rules and Regulations against any or all of the tenants of the Project, including Tenant. These Rules and Regulations are in addition to, and shall not be construed to in any way modify or amend, in whole or in part, the terms covenants, agreements and conditions of the Lease. Landlord reserves the right to make such other and reasonable additional rules and regulations as, in its judgment, may from time to time be needed for safety and security, the care and cleanliness

of the Project, or the preservation of good order therein; provided, however, that Tenant shall not be obligated to adhere to such additional rules or regulations until Landlord has provided Tenant with written notice thereof. Tenant agrees to abide by these Rules and Regulations and any such additional rules and regulations issued or adopted by Landlord. Tenant shall be responsible for the observance of these Rules and Regulations by all Tenant Parties.

ATTACHMENT 1 TO EXHIBIT G

REQUEST FOR USE OF COMMON AREA

REQUEST FOR USE OF COMMON AREA

Date of Request: _____

Landlord/Owner: _____

Tenant/Requestor: _____

Property Location: _____

Event Description: _____

Proposed Plan for Security & Cleaning: _____

Date of Event: _____

Hours of Event: (to include set-up and take down): _____

Location at Property (see attached map): _____

Number of Attendees: _____

Open to the Public? [] YES [] NO

Food and/or Beverages? [] YES [] NO

If YES:

- Will food be prepared on site? [] YES [] NO
- Please describe: _____
- Will alcohol be served? [] YES [] NO
- Please describe: _____
- Will attendees be charged for alcohol? [] YES [] NO
- Is alcohol license or permit required? [] YES [] NO

- Does caterer have alcohol license or permit: [] YES [] NO [] N/A

Other Amenities (tent, booths, band, food trucks, bounce house, etc.): _____

Other Event Details or Special Circumstances: _____

The undersigned certifies that the foregoing is true, accurate and complete and he/she is duly authorized to sign and submit this request on behalf of the Tenant/Requestor named above.

[INSERT NAME OF TENANT/REQUESTOR]

By: _____
Name: _____
Title: _____
Date: _____

EXHIBIT H

PTDM

[See attached]

H-1

PARKING AND TRAFFIC DEMAND MANAGEMENT

FORT WASHINGTON REALTY TRUST

47 ERIE STREET AND RELATED PARKING

CAMBRIDGE, MA

April 28, 1999

Table of Contents

- I. General Project Description
- II. Commitment to Mode Split
- III. General Transportation Demand Management Programs
- IV. Alternative Mode Promotions and Incentives
- V. Alternative Work Programs
- VI. Parking Management and SOV Disincentives
- VII. Marketing Programs
- VIII. Monitoring and Reporting Plan
- IX. Office of workplace Development Commitment
- X. Corporate Offices Commercial Parking Certification

Attachments:

1. Registration
2. Certification
3. Vehicle Trips
4. Site Plan
5. Guaranteed Ride Home Program

I. General Project Description

The garage at 47 Eric Street (the “Garage”) is being constructed and will be owned by Fort Washington Realty Trust (“FWRT”) whose address is in care of Lyme Properties, 101 Main Street, 18th Floor, Cambridge, MA 02142. The Garage and 77 surface spaces located at 40 Erie Street and 270 Albany Street will provide the accessory parking spaces pursuant to the Cambridge Zoning Ordinance for 270 Albany Street, 21 Erie Street, 40 Erie Street (also known as 130 Waverly Street and Fort Washington Research Park Phase 1) and 200 Sidney Street (Fort Washington Research Park Phase 2) (together, the “Buildings”). Of these four Buildings, all but Fort Washington Phase 2 are built and occupied. All of the occupied buildings received certificates of occupancy prior to the enactment of the PTDM ordinance. The Garage contains a total of 447 accessory parking spaces. The 447 Garage spaces are allocated among the four Buildings as follows:

	Building Square Footage	# Spaces
270 Albany Street	70,000	90
21 Erie Street	52,000	63
40 Erie Street (130 Waverly Street)	109,000	125
200 Sidney Street	135,000	169

The existing surface spaces serve 40 Erie Street. A “Non-Commercial Parking Space Registration Form” for the Garage and existing surface spaces at 270 Albany and 40 Erie Street (a total of 524 spaces), a copy of which is attached, was filed with the Cambridge Department of Traffic, Parking and Transportation and approved by the Director on October 28, 1997 (**Attachment 1**).

A building permit for the garage was issued November 4, 1997 (#0997154), and construction will be complete on or about April 30, 1999.

The 447 accessory parking spaces in the Garage are located on six levels and served by two elevators. All of the Garage and surface spaces are employee spaces. There are no commercial spaces in the Garage or surface lots. The gross size of the garage is 121,000 gross square feet.

The tenants located in the Buildings served by the Garage and surface lots are:

- 270 Albany Street:
 - Millennium Pharmaceuticals, Inc. (“Millennium”) – 200 employees
 - Plex, LLC (“Plex”) – 2 employees
- 21 Eric Street:
 - Heliotrope Studios Ltd. (“Heliotrope”) – 3 employees
 - Reprogenesis, Inc. (“Reprogenesis”) – 33 employees
 - TVisions, Inc. (“TVisions”) – 100 employees
- 40 Erie Street:
 - Vertex Pharmaceuticals, Incorporated (“Vertex”) – 261 employees
 - Millennium – 50 employees
- 200 Sidney Street:
 - Not yet leased, but expected to be 540 employees based on a projection of 4 persons per 1000 square feet

Average daily vehicle trips expected to be generated by the Buildings are set forth in the attached schedule (**Attachment 3**).

The nearest public transit is Central Square, approximately .7 miles away. The nearest bicycle paths or lanes are on Mass. Ave. in Central Square, along the Charles River at Memorial Drive and on the MIT campus.

Bicycle lanes are planned for the Sidney/Waverly/Vasser “Cambridge Roadway Improvements”. A site plan is attached showing the location of the Garage and the Buildings (**Attachment 4**).

The contact person for this project is Robert L. Green, Lyme Properties 18th Floor, 101 Main St., Cambridge, MA 02142, telephone, (617) 225-0909.

II. Commitment to Mode Split

FWRT has agreed to a mode split goal of 61% for single occupancy vehicles.

III. General Transportation Demand Management Programs

A. Membership in Transportation Management Association

A Transportation Management Association is a private not-for-profit organization whose objective is to coordinate member business and other resources to improve transportation. The local organization, the Charles River Transportation Management Association (CRTMA), works with employers to develop voluntary, cost effective measures that benefit the members of the organization. The CRTMA assists businesses in developing internal transportation policies and programs that offer employees commute options at reduced costs. The CRTMA can facilitate the development of joint programs between groups of businesses. The CRTMA provides a connection with local, state and federal agencies to inform participating members of recent developments in transportation and assist in compliance with regulations. Services by the CRTMA include:

- Corporate transportation policy analysis
- Monitoring of government policy
- Guaranteed ride home program
- RideSource car and van matching
- Information resource for commute alternative
- Marketing of commute choices
- Development of incentive programs
- Employer transportation advisor and training program
- Pedestrian and bicycle incentive program
- Local shuttle bus service for members

FWRT or an affiliate will join the CRTMA. FWRT will include provisions in all future tenant leases informing them of the programs available under the CRTMA and encouraging participation by tenants.

B. Guaranteed Ride Home

Many employees drive to work because of concern that they cannot get home quickly in the event of an emergency or need a car for unexpected travel. Either directly or through its leases with tenants, FWRT will provide a guaranteed ride home to employees in such an event. The attached CRTMA Guaranteed Ride Home Program or a similar one will be provided (**Attachment 5**).

C. Employee Transportation Coordinator

FWRT will designate a full-time employee as Employee Transportation Coordinator (ETC) to assist in the day to day administration of TDM programs. The ETC will be responsible for coordination with CRTMA and tenants and staffing an on-site commuter services desk that will sell transit passes, tokens, and commuter checks; distribute marketing materials; and administer the guaranteed ride home program.

D. Initial Tenant Survey

In all future tenant leases, FWRT will include a provision encouraging tenants to provide an initial survey upon occupancy including information about the characteristics and altitudes of employees and customers in order to refine existing TDM programs and develop new ones.

E. Electric Vehicle Recharging Facility

Promptly upon a request therefor by any tenant or employee of the Buildings, FWRT will install an electric vehicle recharging facility in the garage and will distribute information on the availability and use to tenants and visitors.

IV. Alternative Mode Promotions and Incentives

A. MBTA Corporate Pass Program and Subsidized Transit Passes

On-site sales of MBTA transit passes and commuter vouchers through the MBTA Corporate Pass Program will begin after at least 50% of the tenants have occupied 200 Sidney Street. Working with MBTA and CARAVAN, unsold passes will be carried over into the next month or returned for credit on future purchases. Sales will be monitored for several months to establish the appropriate number of passes to be purchased in subsequent months. FWRT will exercise reasonable efforts to negotiate lease provisions in future leases regarding tenants who do not presently subsidize MBTA passes to do so in the future.

B. Participation in Private Bus Shuttle Service

FWRT has also met with CRTMA to discuss establishing shuttle service for the Buildings. The current CRTMA routes do not provide service to the Red Line or Central Square. With new membership and additional shuttle participation by its members, CRTMA has indicated that it might assume responsibility for operating shuttles that could provide service between the buildings and Central Square. However, because leases for substantially all of the space in the Buildings are already in effect and shuttle costs cannot be passed on tenants, FWRT is not able to unconditionally commit to such service unless it can be provided cost efficiently and the tenants voluntarily agree to pay for it. However working with CRTMA, FWRT will exercise reasonable efforts to convince tenants to participate and implement Red Line shuttle service.

C. Green Line Shuttle Study

Within twelve months of 90% occupancy of 200 Sidney Street, FWRT or CRTMA will complete a study on the feasibility of providing service connecting the Buildings to the B, C, and D Green Line branches. This study will be undertaken by FWRT alone or in combination with others including perhaps tenants of the Buildings or CRTMA and will include estimates of demand and cost. The study will be presented to the PDTM Planning Officer along with FWRT's recommendations.

D. Ridesharing Vehicles

FWRT will provide up to 10% of accessory parking in convenient locations in order to encourage ridesharing. The actual number of spaces will be adjusted based on usage, but additional preferential spaces will be available as needed for new ridesharing vehicles. The Employee Transportation Coordinator will administer, monitor, and adapt the preferential parking as needed.

All site employees will be provided with access to CARAVAN for Commuter's Ridesource regional ridesource matching database. Also, a project ridematching database will be developed.

E. Bicycle and Pedestrian Programs

FWRT will provide secure bicycle parking in the garage and in exterior locations and such garage bicycle parking will be covered and secured. No less than the minimum parking required by zoning will be provided. Short term bicycle parking will be provided near building entrances for visitors, customers, and couriers.

Set forth below is a chart summarizing existing TDM programs for the Garage and lots:

	<u>Millennium</u>	<u>Vertex</u>	<u>TVisions 4</u>	<u>FWRT on behalf of 200 Sidney</u>
Shuttle Participation	✓			
MBTA Pass Program ¹	✓			✓
Guaranteed Ride Home ²	✓			✓
Carpooling and Caravan Ride matching				✓
Flexible Work Schedules	✓	✓		
Publicity and Marketing				✓
Bicycles/Racks/Showers	✓	✓		✓
Discount and Preferential Parking for Vanpools and Carpools				✓
Financial Incentives ³	✓			

In all cases the TDM measures described hereunder will be implemented by FWRT, individual building owners, or the tenants of the Buildings.

V. Alternative Work Programs

FWRT will include provisions in all leases giving tenants information on the advantages and benefits of telecommuting, flexible time and compressed work week programs and encouraging tenants to work directly with the City of Cambridge on such programs.

- ¹ Millennium offers full payment up to \$60 per month, deducted from paychecks before taxes.
- ² Millennium also offers free taxi vouchers for meetings.
- ³ Millennium offers \$100 per quarter to employees who elect not to commute by public transit or car.
- ⁴ 21 Erie Street tenants of 35 or less employees excluded.

FOR TRAFFIC, PARKING AND TRANSPORTATION DEPARTMENT USE ONLY
DO NOT WRITE BELOW THIS LINE

ATTACHMENT 1

Date Received: 10/22/97 Comments: Elimination of 14 surface lot spaces at 47 Erie St. to construct a 6 level 447 space garage and elimination of 220 surface lot spaces at 40 Erie St. to construct a 4 story office/R&D building. Also the reconfiguration of surface lot spaces for existing building at 40 Erie St. and maintaining existing spaces at 40 Erie St. and 270 Albany St.

Category: Residential Non-Residential or commercial

Number of parking spaces approved:

_____residential

524 non-residential or non-commercial

Approved: /s/ Susan E. Clippinger
Traffic Director

Date: 10-28-97

Additional Comments:

447	Garage spaces at 47 Erie St.
62	Lot spaces at 40 Erie St.
5	Garage spaces at 270 Albany St.
10	Lot spaces at 270 Albany St.
<hr/>	
524	Total spaces for use

Certification

I hereby certify that a commercial parking permit has been obtained for each space being used for commercial parking. None of the other existing or proposed parking spaces at this parking facility have been or will be available as commercial parking spaces until a commercial parking permit therefor has been obtained.

Fort Washington Realty Trust

/s/ David M. Roby

David M. Roby, Trustee

Date 3/11/99

Attachment 3

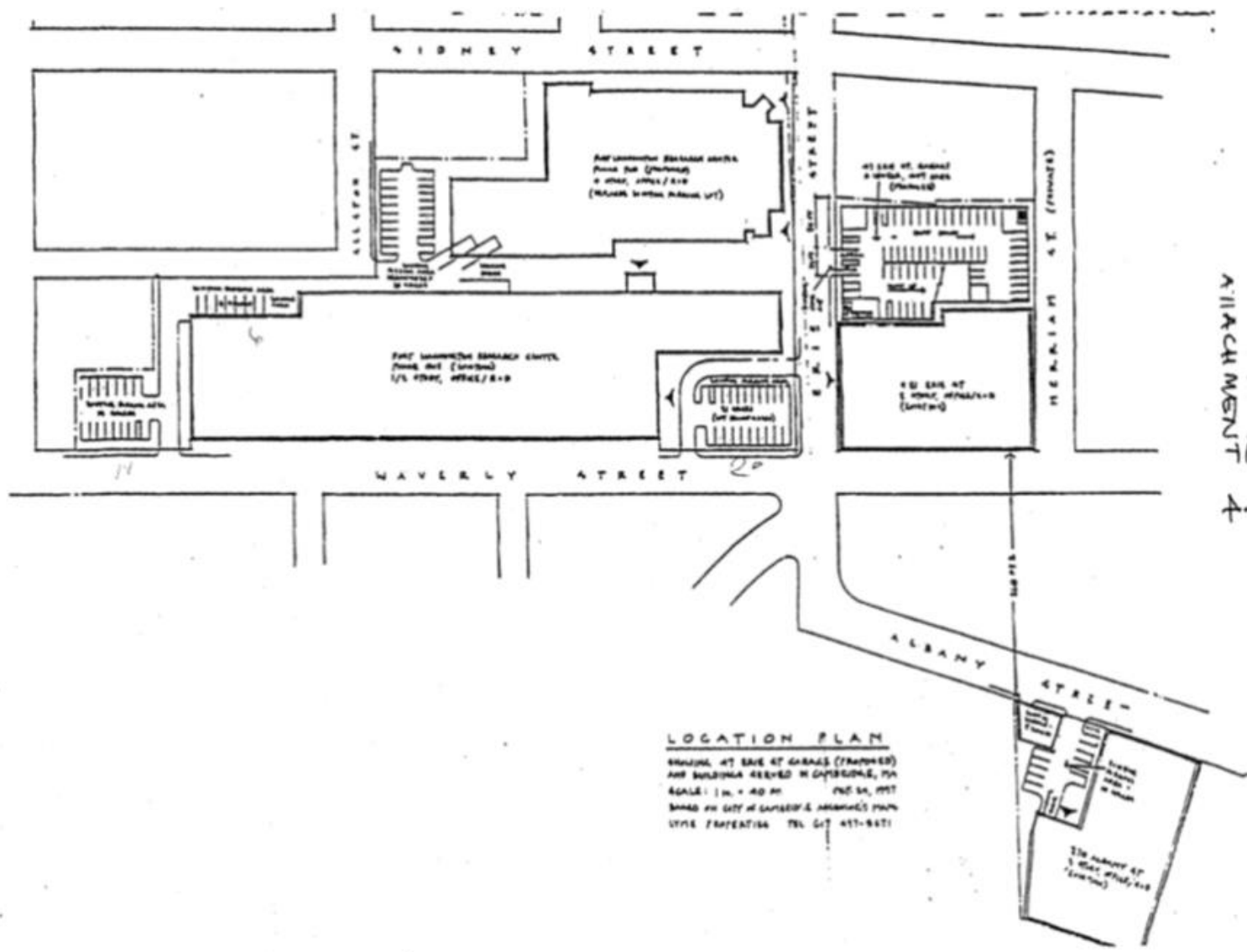
Vehicle Trips

337,000 SF of lab space @ ITE 760 = 2,782 trips/day

20,000 SF of office @ ITE 710 = 386 trips/day

Total trips = 3168 trips/day

3,168 x 65.6 = 2,078 trips/day



LOCATION PLAN
 SHOWING 100 BANK AT CORNER W. 1ST ST. / W. 1ST ST.
 AND BUILDING KEPT IN COMPLIANCE, 1984
 SCALE: 1" = 40 FT. FEB 24, 1987
 DRAWN BY CITY OF GAITHERSBURG ARCHITECTURAL DIVISION
 UTILE PROJECTS TEL. 501-417-8471



c/o Cambridge
Technology Partners
304 Vassar Street
Cambridge, MA 02139
Phone 617-679-5381 Fax 617-374-8300
email coin1@mit.edu

By Fax 5 Pages

April 21, 1999

Joseph Barr
TDM Planner
City of Cambridge
Community Development
57 Inman St.
Cambridge, MA 02139

Dear Joe:

Please find attached generic documentation for Charles River Transportation Management Association's Guaranteed Ride Home program.

In the past few weeks, we have worked with a number of businesses and developers who are in the process of preparing IPOP or PTDM plans. Many of these entities have indicated they will join CRTMA, and rely on us for Guaranteed Ride Home program.

The attached policies and procedures will provide you with an overview of how our program will work. The policy and procedure will be reviewed, and may be modified based on the needs of different CRTMA members, but I anticipate programs will be substantially the same.

Perhaps we should revisit City of Cambridge participation in CRTMA. We would be very interested in implementing a Guaranteed Ride Home program, and other TDM measures for city employees as well!

I will call to answer any questions that you may have about Guaranteed Ride Home.

Sincerely,

Jim Gascoigne
Executive Director

cc Tom Lucey
Tom Ragno
Debbie Black
Joan Peyrebrune
Bob Green

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Carpooling and Caravan Ride matching				✓
Flexible Work Schedules	✓	✓		
Publicity and Marketing				✓
Bicycles/Racks>Showers	✓	✓		✓
Discount and Preferential Parking for Vanpools and Carpools				✓
Financial Incentives ³	✓			

In all cases the TDM measures described hereunder will be implemented by FWRT, individual building owners, or the tenants of the Buildings.

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- 1 Millennium offers full payment up to \$60 per month, deducted from paychecks before taxes.
- 2 Millennium also offers free taxi vouchers for meetings.
- 3 Millennium offers \$100 per quarter to employees who elect not to commute by public transit or car.
- 4 21 Erie Street tenants of 35 or less employees excluded.

VI. Parking Management and SOV Disincentives

F-WRT will control access to the Garage by issuance of access cards and control devices installed at entrances to the Garage.

VII. Marketing Programs

A. New Employees

FWRT will compile material and information on each of these measures and provide all of its tenants' employees with a commute alternatives "packet." In addition to information on each measure, the packet will include a set of guidelines explaining available options and how to establish an in-house TDM program and/or benefits of participating in the local transportation management association. The packet will also include public transportation schedules, bicycle path information, location of on-site bicycle parking and location of changing/showering facilities.

B. Commuter Newsletter

FWRT will distribute a quarterly newsletter focusing on alternative commuting. The newsletter will include information on existing the new TDM programs, discuss advantages of alternative modes, provide maps of transit and shuttle bus routes, provide a question and answer section, and provide phone numbers addresses and website addresses for alternative commute resources and programs. FWRT will designate an individual responsible for the production and distribution of the newsletter, or contract the task to a third party such as CRTMA.

C. Website

FWRT or CRTMA will develop and maintain a website devoted to alternative commute programs and measures or containing a section devoted to alternative commuting. At a minimum, the website will describe the programs, resources and measures provided to FWRT tenants and contain links to oilier websites such as City of Cambridge, MBTA and CARAVAN for Commuters that provide alternative commuter services and information.

D. Promotion of Transportation Fair/Events

FWRT will notify its tenants (via flyers or posting at kiosk, bulletin boards, etc.) of upcoming transportation fairs and events organized by others as the schedules for such events become available. FWRT or CRTMA will organize an on-site transportation information fair at least once a year.

E. Commuter Information Centers

Commuter Information Centers, including bus schedules and maps, ridesharing marketing forms and information about the guaranteed ride home program, will be created in a central location on site.

VIII. Monitoring and Reporting Plan

The monitoring and reporting plan will include the following:

- Yearly mode split surveys, including questions about altitudes and suggestions 4/26/99 for new programs.
- Bi-yearly driveway and parking occupancy counts (starting with the first year of occupancy).
- Commitment to report this information to the city on a yearly basis for use in determining whether the project is meeting its mode split commitment.

IX. Office of Workforce Development Commitment

FWRT commits to work with the Cambridge Office of Workforce Development.

X. Corporate Office Certification

Attached is the Corporate Office Certification concerning commercial parking (**Attachment 2**).

EXHIBIT I

TENANT'S PROPERTY

None as of the Execution Date.

EXHIBIT J

FORM OF ESTOPPEL CERTIFICATE

To: BMR-Sidney Research Campus LLC
17190 Bernardo Center Drive
San Diego, California 92128
Attention: Vice President, Real Estate Legal

BioMed Realty, L.P.
17190 Bernardo Center Drive
San Diego, California 92128

Re: [PREMISES ADDRESS] (the "Premises") at 40 Erie Street, Cambridge, Massachusetts (the "Property")

The undersigned tenant ("Tenant") hereby certifies to you as follows:

1. Tenant is a tenant at the Property under a lease (the "Lease") for the Premises dated as of [], 20[]. The Lease has not been cancelled, modified, assigned, extended or amended [except as follows: []], and there are no other agreements, written or oral, affecting or relating to Tenant's lease of the Premises or any other space at the Property. The lease term expires on [], 20[].
2. Tenant took possession of the Premises, currently consisting of [] square feet, on [], 20[], and commenced to pay rent on [], 20[]. Tenant has full possession of the Premises, has not assigned the Lease or sublet any part of the Premises, and does not hold the Premises under an assignment or sublease[, except as follows: []].
3. All base rent, rent escalations and additional rent under the Lease have been paid through [], 20[]. There is no prepaid rent[, except \$[]], and the amount of security deposit is \$[] [in cash][OR][in the form of a letter of credit]. Tenant currently has no right to any future rent abatement under the Lease.
4. Base rent is currently payable in the amount of \$[] per month.
5. Tenant is currently paying estimated payments of additional rent of \$[] per month on account of real estate taxes, insurance, management fees and Common Area maintenance expenses.
6. All work to be performed for Tenant under the Lease has been performed as required under the Lease and has been accepted by Tenant[, except []], and all allowances to be paid to Tenant, including allowances for tenant improvements, moving expenses or other items, have been paid.

7. The Lease is in full force and effect, free from default and free from any event that could become a default under the Lease, and Tenant has no claims against the landlord or offsets or defenses against rent, and there are no disputes with the landlord. Tenant has received no notice of prior sale, transfer, assignment, hypothecation or pledge of the Lease or of the rents payable thereunder[, except []].

8. [Tenant has the following expansion rights or options for leasing additional space at the Property: []].[OR][Tenant has no rights or options to purchase the Property.]

9. To Tenant's knowledge, no hazardous wastes have been generated, treated, stored or disposed of by or on behalf of Tenant in, on or around the Premises or the Project in violation of any environmental laws.

10. The undersigned has executed this Estoppel Certificate with the knowledge and understanding that [INSERT NAME OF LANDLORD, PURCHASER OR LENDER, AS APPROPRIATE] or its assignee is [acquiring the Property/making a loan secured by the Property] in reliance on this certificate and that the undersigned shall be bound by this certificate. The statements contained herein may be relied upon by [INSERT NAME OF PURCHASER OR LENDER, AS APPROPRIATE], BMR-Sidney Research Campus LLC, BioMed Realty, L.P., BioMed Realty Trust, Inc., and any [other] mortgagee of the Property and their respective successors and assigns.

Any capitalized terms not defined herein shall have the respective meanings given in the Lease.

Dated this [] day of [___], 20[]].

GRITSTONE ONCOLOGY, INC.,
a Delaware corporation

By: _____
Name: _____
Title: _____

***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

SARATOGA CENTER

OFFICE BUILDING NET LEASE

BASIC LEASE INFORMATION

Date of Lease: March 24, 2017

Landlord: HACIENDA PORTFOLIO VENTURE, LLC, a Delaware limited liability company

Landlord's Address for Notices: c/o Ellis Partners LLC
111 Sutter Street, Suite 800
San Francisco, CA 94104
Attn: James F. Ellis

Tenant: GRITSTONE ONCOLOGY, INC.,
a Delaware corporation

Tenant's Address for Notices: Saratoga Center
4696 Willow Road
Pleasanton, California 94588
Attn: Office Manager

Building: 4696-4698 Willow Road, Pleasanton,
California (Building One)

Leased Premises: Approximately 42,620 rentable square feet consisting of the entire Building

Rentable Area:

Leased Premises: Approximately 42,620 rentable square feet

Building: Approximately 42,620 rentable square feet

Project: Approximately 84,320 rentable square feet

Term Commencement Date: One hundred eighty (180) days after the date that Landlord delivers the Leased Premises to Tenant in the Delivery Condition (as defined in Section 2.2 below), estimated to occur on or about April 1, 2017, subject to Section 9.32 (Lease Contingency) below (the "Delivery Date"). Except for extra services requested by Tenant in writing (as set forth in Section 4.2 below), no Rent shall be due until the Term Commencement Date.

Term Expiration Date:

The last day of the eighty-sixth (86th) full calendar month after the Term Commencement Date (meaning if the Term Commencement Date shall occur on a date other than the first day of a calendar month, the Term from the Term Commencement Date shall be eighty-six (86) full calendar months plus a partial month).

Option to Extend:

Number of Extension Periods: One (1)
Years per Extension Period: Five (5)

Base Rent:

Term Commencement Date through the last day of the 12th full calendar month after the Term Commencement Date = \$72,454.00 per month (based on \$1.70 per rentable square foot of Rentable Area per month).

Notwithstanding anything to the contrary contained in this Lease, no Base Rent shall be payable for the first two (2) months after the Term Commencement Date (the "Base Rent Abatement Period"). The collective Base Rent abatement is equivalent to \$144,908.00 (the "Collective Base Rent Abatement Amount"). Tenant shall be responsible for the payment of Tenant's Proportionate Share of Basic Operating Costs during the Base Rent Abatement Period.

Month 13 through Month 24 = \$74,627.62 per month (based on approximately \$1.75 per rentable square foot of Rentable Area per month).

Month 25 through Month 36 = \$76,866.45 per month (based on approximately \$1.80 per rentable square foot of Rentable Area per month).

Month 37 through Month 48 = \$79,172.44 per month (based on approximately \$1.86 per rentable square foot of Rentable Area per month).*

Month 49 through Month 60 = \$81,547.62 per month (based on approximately \$1.91 per rentable square foot of Rentable Area per month).

Month 61 through Month 72 = \$83,994.04 per month (based on approximately \$1.97 per rentable square foot of Rentable Area per month).

Month 73 through Month 84 = \$86,513.87 per month (based on approximately \$2.03 per rentable square foot of Rentable Area per month).

Month 85 through the Term Expiration Date = \$89,109.28 per month (based on approximately \$2.09 per rentable square foot of Rentable Area per month).

* Provided that no Event of Default (beyond any applicable notice and cure period) has occurred at any time during the Term, Landlord shall provide one (1) additional month of abated Base rent to be applied to the fortieth (40th) full calendar month after the Term Commencement Date. Landlord, at its option, shall have the right to purchase the abated Base Rent for month forty (40) by providing Tenant with an equivalent cash payment, in which case, Tenant shall be required to pay the Base Rent for the fortieth (40th) full calendar month after the Term Commencement Date when such Base Rent becomes due.

Tenant's Proportionate Share:

100.00% of the Building and 50.55% of the Project

Landlord estimates that Tenant's Proportionate Share of Basic Operating Costs will be approximately \$0.48 per rentable square foot per month for calendar year 2017. Landlord does not represent, warrant or guarantee to Tenant that Tenant's Proportionate Share of Operating Costs will be the above-stated amount during the Term of the Lease. Landlord's estimate is merely intended to be Landlord's reasonable estimate, based upon information presently available to Landlord as of the Date of Lease. Tenant acknowledges and agrees to the foregoing limitation with respect to Landlord's estimate.

Utilities, Janitorial, and HVAC Maintenance:

In addition to payment of Tenant's Proportionate Share of Basic Operating Costs and other expenses, Tenant shall be responsible for, among other things, the payment of all separately-metered utilities and non-metered utilities for the Leased Premises, janitorial services for the Leased Premises, and HVAC maintenance.

Parking Spaces:

One hundred sixty-two (162) free and unreserved, surface parking spaces in the Project (based on 3.8 parking spaces per one thousand (1,000) rentable square feet of Rentable Area of the Leased Premises).

Security Deposit:

\$992,437.58, which shall be provided in the form of a letter of credit (see Section 5.14). The foregoing amount is subject to reduction (see Section 5.14).

Guarantor:

None

Landlord's Broker:

CBRE, Inc.

Tenant's Broker:

Jones Lang LaSalle

EXHIBITS:

- Exhibit A - Floor Plan of the Leased Premises
- Exhibit B - Initial Improvement of the Leased Premises
- Exhibit C - Confirmation of Term of Lease
- Exhibit D - Building Rules and Regulations
- Exhibit E - Asbestos Notification
- Exhibit F - Removable Fixtures

The foregoing BASIC LEASE INFORMATION is incorporated herein and made a part of the LEASE to which it is attached. If there is any conflict between the BASIC LEASE INFORMATION and the LEASE, the BASIC LEASE INFORMATION shall control.

OFFICE BUILDING NET LEASE

THIS LEASE is made as of the date specified in the BASIC LEASE INFORMATION sheet, by and between the landlord specified in the BASIC LEASE INFORMATION sheet ("Landlord") and the tenant specified in the BASIC LEASE INFORMATION sheet ("Tenant").

Article 1. Definitions

1.1. **Definitions:** Terms used herein shall have the following meanings:

1.2. **"Additional Rent"** shall mean all monetary obligations of Tenant under this Lease other than the obligation for payment of Net Rent.

1.3. Intentionally deleted.

1.4. **"Base Rent"** shall mean the minimum monthly rental amounts set forth in the Basic Lease Information due from time to time as rental for the Leased Premises.

1.5. Intentionally deleted.

1.6. **"Basic Operating Costs"** shall have the meaning given in Section 3.5.

1.7. **"Building"** shall mean the building and other improvements associated therewith identified on the Basic Lease Information sheet.

1.8. **"Building Standard Improvements"** shall mean the standard materials ordinarily used by Landlord in the improvement of the Leased Premises.

1.9. **"Common Areas"** shall mean, as applicable, (a) the areas of the Building devoted to non-exclusive uses such as common corridors, lobbies, fire vestibules, electric and telephone closets, restrooms, mechanical closets, janitor closets, loading docks, and other similar facilities for the benefit of all tenants (and invitees) and (b) other areas of the Project available for the non-exclusive use and benefit of all tenants (and invitees).

1.10. **"Computation Year"** shall mean a fiscal year consisting of the calendar year commencing January 1st of each year during the Term and continuing through the Term with a short or stub fiscal year in (i) the period between the Term Commencement Date and December 31 of such year and (ii) any partial year in which the Lease expires or is terminated for the period between January 1 of such year and the date of lease termination or expiration.

1.11. Intentionally deleted.

1.12. **"Landlord's Broker"** shall mean the individual or corporate broker identified on the Basic Lease Information sheet as the broker for Landlord.

1.13. **"Lease Year"**. Shall mean each anniversary of the Term Commencement Date during the Term. The first "Lease Year" shall commence on the Term Commencement Date and end on the

day immediately preceding the first anniversary of the Term Commencement Date, and each subsequent Lease Year shall mean each successive period of twelve (12) months following the first Lease Year during the initial Term; provided, that, the last Lease Year of the initial Term shall end on the Term Expiration Date set forth above for the initial Term.

1.14. "Leased Premises" shall mean the floor area more particularly shown on the floor plan attached hereto as **Exhibit A**, containing the Rentable Area (as such term is defined in Section 1.19 below) specified on the Basic Lease Information sheet.

1.15. "Net Rent" shall mean the total of Base Rent and Tenant's Proportionate Share of Basic Operating Costs calculated in accordance with Section 3.4.

1.16. "Permitted Use" shall mean research and development, manufacturing, general office (and uses ancillary to each of the foregoing) only; provided, however, that Permitted Use shall not include (a) offices or agencies of any foreign government or political subdivision thereof; (b) offices of any agency or bureau of any state, county or city government; (c) offices of any health care professionals which are not ancillary to the Permitted Use above; (d) schools or other training facilities which are not ancillary to corporate, executive or professional office use; or (e) retail or restaurant uses.

1.17. "Project" shall mean, collectively, the Building/Leased Premises and the building situated at 5934 Gibraltar Drive, Pleasanton, California ("**Building Two**"), including, the parking and common areas affiliated therewith, and the real property on which the Building/Leased Premises and Building Two and the parking and common areas are located.

1.18. "Rent" shall mean Net Rent plus Additional Rent.

1.19. "Rentable Area" shall mean, as applicable, the area or areas of space in the Building and/or the Project. The rentable square footage of the Building/Leased Premises is measured from the outermost exterior edge of the overhang above the frontage wall or walls (the "dripline") to the exterior faces of all other exterior walls or to the centerline of party walls, as the case may be. The areas of space in Building Two are determined in accordance with the Standard Method for Measuring Floor Area in Office Buildings published by the Building Owners and Managers Association International (ANSI-Z65.1-1996). The Rentable Area of the Leased Premises is agreed to be the amount of rentable square footage stated on the Basic Lease Information sheet.

1.20. "Security Deposit" shall mean the amount specified on the Basic Lease Information sheet to be paid by Tenant to Landlord and held and applied pursuant to Section 5.14.

1.21. Intentionally deleted.

1.22. Intentionally deleted.

1.23. "Tenant Improvements" shall have the meaning given in **Exhibit B**, if any.

1.24. "Tenant's Broker" shall mean the individual or corporate broker identified on the Basic Lease Information sheet as the broker for Tenant.

1.25. Intentionally deleted.

1.26. **“Tenant’s Proportionate Share”** is specified on the Basic Lease Information sheet and is based on the percentage which the Rentable Area of the Leased Premises bears to the total Rentable Area of the Project.

1.27. **“Term”** shall mean the period commencing with the Term Commencement Date and ending at midnight on the Term Expiration Date.

1.28. **“Term Commencement Date”** shall be the date set forth on the Basic Lease Information sheet.

1.29. **“Term Expiration Date”** shall be the date set forth on the Basic Lease Information sheet, unless sooner terminated pursuant to the terms of this Lease or unless extended pursuant to the provisions of Section 8.1.

1.30. **Other Terms.** Other terms used in this Lease and on the Basic Lease Information sheet shall have the meanings given to them herein and thereon.

Article 2.
Leased Premises

2.1. **Lease.** Landlord hereby leases to Tenant and Tenant hereby leases from Landlord the Leased Premises upon all of the terms, covenants and conditions set forth in this Lease.

2.2. Acceptance of Leased Premises; Delivery Condition.

(a) Tenant acknowledges that: (a) it has been advised by Landlord, Landlord’s Broker and Tenant’s Broker, if any, to satisfy itself with respect to the condition of the Leased Premises (including, without limitation, the HVAC, electrical, plumbing and other mechanical installations, fire sprinkler systems, security, environmental aspects, and compliance with applicable laws, ordinances, rules and regulations including but not limited to the Americans with Disabilities Act (ADA)) and the present and future suitability of the Leased Premises for Tenant’s intended use; (b) Tenant has made such inspection and investigation as it deems necessary with reference to such matters and, except for the Delivery Condition (as defined in Section 2.2(b) below) assumes all responsibility therefor as the same relate to Tenant’s occupancy of the Leased Premises and the term of this Lease; and (c) neither Landlord nor Landlord’s Broker nor any of Landlord’s agents has made any oral or written representations or warranties with respect to the condition, suitability or fitness of the Leased Premises other than as may be specifically set forth in this Lease. Except for the Delivery Condition, Tenant accepts the Leased Premises in its AS IS condition existing on the date Tenant executes this Lease, subject to all matters of record and applicable laws, ordinances, rules and regulations. Tenant acknowledges that neither Landlord nor Landlord’s Broker nor any of Landlord’s agents has agreed to undertake any alterations or additions or to perform any maintenance or repair of the Leased Premises except for the maintenance specified herein. Subject to the contingency set forth in Section 9.32 below, Landlord shall use commercially reasonable efforts to deliver possession of the Leased Premises to Tenant on or before April 1, 2017 in the condition specified in Section 2.2(b). If Landlord cannot deliver possession of the Leased Premises to Tenant on or before such date, the validity of this Lease shall not be affected; provided, the Term Commencement Date and

the Term Expiration Date shall be extended commensurately. If the commencement date and/or the expiration date of this Lease is other than the Term Commencement Date and Term Expiration Date specified in the Basic Lease Information or is not set forth in the Basic Lease Information, the parties shall execute that certain Confirmation of Term of Lease, substantially in the form of **Exhibit C** hereto specifying the actual commencement date, expiration date and the date on which Tenant is to commence paying Rent. Tenant shall execute and return such Confirmation of Term of Lease to Landlord within fifteen (15) days after Tenant's receipt thereof. If Tenant fails to execute and return (or reasonably object in writing to) the Confirmation of Term of Lease within fifteen (15) days after receiving it, Tenant shall be deemed to have executed and returned it without exception.

(b) Notwithstanding the foregoing, Landlord shall deliver the Building to Tenant broom clean and with the HVAC, mechanical, electrical, and plumbing systems serving the Building in good working order, repair, and condition and in compliance with all applicable laws; in addition, the parking lot and path of travel to and from the Building shall be in compliance with all applicable laws, including all applicable laws related to accessibility by individuals with disabilities (collectively, the "Delivery Condition"). Landlord acknowledges and agrees that the Leased Premises have been vacated by the current tenant of the Leased Premises and Landlord agrees to use commercially reasonable efforts to commence and complete satisfaction of the Delivery Condition on or before the Contingency Outside Date.

2.3. Right To Relocate Leased Premises. [intentionally deleted].

2.4. Reservation of Rights. Landlord reserves the right from time to time, to install, use, maintain, repair, relocate and/or replace pipes, conduits, wires and equipment within and around the Building and the Common Areas and to do and perform such other acts and make such other changes, additions, improvements, repairs and/or alterations in, to or with respect to the Building and the Project (including without limitation with respect to the driveways, parking areas, walkways and entrances to the Project) as Landlord may, in the exercise of sound business judgment, deem to be appropriate. In connection therewith, Landlord shall have the right to close temporarily any of the Common Areas while engaged in making any such repairs, improvements or alterations; provided that Landlord shall provide Tenant with reasonable advance written notice of such closures (except in the event of an emergency) and that Landlord shall use commercially reasonable efforts to minimize interference with Tenant's use and enjoyment of the Leased Premises, and Landlord shall use reasonable means not to materially interfere with Tenant access to the Leased Premises.

**Article 3.
Term, Use and Rent**

3.1. Term. Except as otherwise provided in this Lease, the Term shall commence upon the Term Commencement Date, and unless sooner terminated, shall end on the Term Expiration Date. Subject to Landlord's reasonable security precautions and for factors entirely beyond the reasonable control of Landlord, Tenant shall have access to the Leases Premises twenty-four (24) hours per day, seven (7) days per week, and fifty-two (52) weeks per year. Any entry and possession of the Leased Premises by Tenant prior to the Term Commencement Date shall be on all terms and conditions of the Lease, except that the obligation to pay Rent shall commence on the Term Commencement Date (except for extra services requested by Tenant in writing as set forth in Section 4.2 below).

3.2. Use. Tenant shall use the Leased Premises solely for the Permitted Use and for no other use or purpose. Tenant shall not commit waste, overload the Building's structure or the Building's systems or subject the Leased Premises to any use that would damage the Leased Premises.

3.3. Base Rent.

(a) Tenant shall pay the Base Rent to Landlord in accordance with the schedule set forth on the Basic Lease Information sheet and in the manner described below. Tenant shall prepay **\$92,911.60** of Net Rent (to be credited for Net Rent due and payable after the Base Rent Abatement Period expires) upon execution of this Lease. Tenant shall pay the Net Rent (consisting of Base Rent plus, when applicable in accordance with Section 3.4 below, Tenant's Proportionate Share of Basic Operating Costs) in monthly installments on or before the first day of each calendar month during the Term and any extensions or renewals thereof, in advance without demand and without any reduction, abatement, counterclaim or setoff, in lawful money of the United States at Landlord's address specified on the Basic Lease Information sheet or at such other address as may be designated by Landlord in the manner provided for giving notice under Section 9.11 hereof.

(b) If the Term commences on other than the first day of a month, then the Base Rent provided for such partial month shall be prorated based upon a thirty (30)-day month and the prorated installment shall be paid on the first day of the calendar month next succeeding the Term Commencement Date together with the other amounts payable on that day. If the Term terminates on other than the last day of a calendar month, then the Net Rent provided for such partial month shall be prorated based upon a thirty (30)-day month and the prorated installment shall be paid on the first day of the calendar month in which the date of termination occurs.

3.4. Tenant's Proportionate Share of Basic Operating Costs.

(a) Commencing on the Term Commencement Date and continuing through the remainder of the Term, Tenant shall pay to Landlord Tenant's Proportionate Share of Basic Operating Costs.

(b) During the first Computation Year, on or before the first day of each month during such Computation Year, Tenant shall pay to Landlord one-twelfth (1/12th) of Landlord's estimate of the amount payable by Tenant under Section 3.4(a) as set forth in Landlord's written notice to Tenant. During the last month of each Computation Year (or as soon thereafter as practicable), Landlord shall give Tenant notice of Landlord's estimate of the amount payable by Tenant under Section 3.4(a) for the following Computation Year. On or before the first day of each month during the following Computation Year, Tenant shall pay to Landlord one-twelfth (1/12) of such estimated amount, provided that if Landlord fails to give such notice in the last month of the prior year, then Tenant shall continue to pay on the basis of the prior year's estimate until the first day of the calendar month next succeeding the date such notice is given by Landlord; and from the first day of the calendar month following the date such notice is given, Tenant's payments shall be adjusted so that the estimated amount for that Computation Year will be fully paid by the end of that Computation Year. If at any time or times Landlord determines that the amount payable under Section 3.4(a) for the current Computation Year will vary from its estimate given to Tenant, Landlord, by notice to Tenant, may revise its estimate for such Computation Year, and subsequent payments by Tenant for such Computation Year shall be based upon such revised estimate.

(c) Following the end of each Computation Year, Landlord shall deliver to Tenant a statement of amounts payable under Section 3.4(a) for such Computation Year. If such statement shows an amount owing by Tenant that is less than the payments for such Computation Year previously made by Tenant, and if no Event of Default (as defined below) is outstanding at the time such statement is delivered, Landlord shall credit such amount to the next payment(s) of Net Rent falling due under this Lease; provided that if such Computation Year is the last Computation Year of the Term, Landlord shall promptly refund such overpayment to Tenant. If such statement shows an amount owing by Tenant that is more than the estimated payments for such Computation Year previously made by Tenant, Tenant shall pay the deficiency to Landlord within fifteen (15) days after delivery of such statement. The respective obligations of Landlord and Tenant under this Section 3.4(c) shall survive the Term Expiration Date, and, if the Term Expiration Date is a day other than the last day of a Computation Year, the adjustment in Tenant's Proportionate Share of Basic Operating Costs pursuant to this Section 3.4(c) for the Computation Year in which the Term Expiration Date occurs shall be prorated in the proportion that the number of days in such Computation Year preceding the Term Expiration Date bears to three hundred sixty-five (365).

(d) Landlord shall have the same remedies for a default in the payment of Tenant's Proportionate Share of Basic Operating Costs as for a default in the payment of Base Rent.

(e) Tenant's Right to Audit Basic Operating Costs. Provided that (i) no Event of Default is then occurring hereunder, nor (ii) is any event occurring which with the giving of notice or the passage of time, or both, would constitute an Event of Default, then in the event that Basic Operating Costs allocated to the Building increases by more than five percent (5%) in any Computation Year as compared to the immediately preceding Computation Year, Tenant, at its sole expense, shall have the right, exercisable within six (6) months after the end of the Computation Year or the receipt of a reconciliation statement for the Computation Year (if applicable), to review and audit Landlord's books and records regarding such increase in Basic Operating Costs with respect to such Computation Year for the sole purpose of determining the accuracy thereof. Such review or audit shall be performed by a nationally recognized accounting firm that calculates its fees with respect to hours actually worked (as opposed to a calculation based upon percentage of recoveries or other incentive arrangement), shall take place during business hours in the office of Landlord or Landlord's property manager and shall be completed within sixty (60) days after Tenant's delivery to Landlord of notice of its election to conduct such audit. If Tenant does not so review or audit Landlord's books and records, the Basic Operating Costs for a particular Computation Year shall be final and binding upon Tenant. In the event that such audit of Landlord's books and records reveals that the amount of Basic Operating Cost paid by Tenant pursuant to Section 3.4, as adjusted pursuant to Section 3.4 above, for the period covered by such audit is less than or greater than the actual amount properly payable by Tenant under the terms of this Lease, Tenant shall promptly pay any deficiency to Landlord or, if Landlord concurs with the results of such audit, Landlord shall promptly refund any excess payment to Tenant, as the case may be. Without limiting the foregoing, in the event that such audit reveals an overstatement of Basic Operating Costs charged to Tenant in excess of seven percent (7%), Landlord shall reimburse Tenant for the reasonable cost of said audit in addition to refunding any excess payment to Tenant as provided above. Tenant shall keep any information gained from its review of Landlord's books and records confidential and shall not disclose it to any other party, except as required by any laws. Prior to being permitted access to Landlord's books and records to conduct any audit permitted by the terms of this Section 3.4, Tenant's accounting firm shall execute a confidentiality agreement, in a form reasonably acceptable to Landlord, pursuant to which Tenant's

accounting firm shall agree (i) to keep any information gained from its review of Landlord's books and records confidential, (ii) not disclose such information to any other party, except as required by any laws, and (iii) such other terms and conditions as Landlord may reasonably require.

3.5. Basic Operating Costs.

(a) Basic Operating Costs shall mean all expenses and costs (but not specific costs which are separately billed to and paid by particular tenants of the Project) of every kind and nature which Landlord shall pay or become obligated to pay because of or in connection with the management, ownership, maintenance, repair, replacement, preservation and operation of the Leased Premises, the Building, the Project and its supporting facilities directly servicing the Building and/or the Project (determined in accordance with generally accepted accounting principles, consistently applied) including, but not limited to, the following:

- (1) Wages, salaries and related expenses and benefits of all on-site and off-site employees and personnel engaged in the operation, maintenance, repair and security of the Project.
- (2) Costs of Landlord's office (including the property management office) to the extent providing for the management of the Project and office operation in the Project, as well as the costs of operation of a room for delivery and distribution of mail to tenants of the Building, if applicable.
- (3) All supplies, materials, equipment and equipment rental used in the operation, maintenance, repair, replacement and preservation of the Project.
- (4) Utilities for the Common Areas of the Project.
- (5) All maintenance, janitorial (for the Common Areas) and service agreements for the Project and the equipment therein, including, without limitation, refuse collection, window cleaning, sidewalks, landscaping, pest control, roof maintenance, Building exterior and service areas (provided, however, that Tenant shall employ its own bonded and reputable janitorial service, subject to Landlord's reasonable prior written approval, to clean the Leased Premises, at Tenant's sole cost and expense).
- (6) A fair market property management fee in an amount not to exceed five percent (5%) of all Rent derived from the Project.
- (7) Legal and accounting services for the Project, including the costs of audits by certified public accountants; provided, however, that legal expenses shall not include the cost of lease negotiations, termination of leases, extension of leases or legal costs incurred in proceedings by or against any specific tenant, or for the defense of Landlord's legal title to the Project.
- (8) All insurance premiums and costs, including, but not limited to, the cost of property and liability coverage and rental income and earthquake and flood insurance applicable to the Project and Landlord's personal property used in connection therewith, as well as deductible amounts applicable to such insurance; provided, however, that Landlord may, but shall not be obligated to, carry earthquake or flood insurance (unless required by applicable law).

(9) Repairs, replacements and general maintenance (except to the extent paid by proceeds of insurance or by Tenant or other tenants of the Project or third parties).

(10) All real estate or personal property taxes, possessory interest taxes, business or license taxes or fees, service payments in lieu of such taxes or fees, annual or periodic license or use fees, excises, transit charges, housing fund assessments, open space charges, assessments, bonds, levies, fees or charges, general and special, ordinary and extraordinary, unforeseen as well as foreseen, of any kind which are assessed, levied, charged, confirmed or imposed by any public authority upon the Project (or any portion or component thereof), its operations, this Lease, or the Rent due hereunder (or any portion or component thereof), except: (i) inheritance or estate taxes imposed upon or assessed against the Project, or any part thereof or interest therein, and (ii) Landlord's personal or corporate income, gift or franchise taxes.

(11) Amortized costs (together with reasonable financing charges) of capital improvements made to the Project subsequent to the Term Commencement Date which are designed to improve the operating efficiency of the Project, achieve energy or carbon reduction, or which may be required by governmental authorities, including, but not limited to, those improvements required for the benefit of individuals with disabilities ("ADA Improvements"), such amortization to be taken in accordance with generally accepted accounting principles.

(b) In the event any of the Basic Operating Costs are not provided on a uniform basis, Landlord shall make an appropriate and equitable adjustment, in Landlord's discretion reasonably exercised.

(c) Notwithstanding any other provision of this Lease to the contrary, in the event that the Project is not fully occupied during any year of the Term, an adjustment shall be made in computing Basic Operating Costs for such year so that Basic Operating Costs shall be computed as though the Project had been 95% occupied during such year.

(d) The following items shall be excluded from Basic Operating Costs: (i) depreciation on the Building and the Project; (ii) debt service; (iii) rental under any ground or underlying lease; (iv) attorneys' fees and expenses incurred in connection with lease negotiations with prospective Project tenants or alleged defaults with other Project tenants; (v) the cost of any improvements or equipment which would be properly classified as capital expenditures (except for any capital expenditures expressly included in Section 3.5(a), including, without limitation, Section 3.5(a)(11)); (vi) the cost of decorating, improving for tenant occupancy, painting or redecorating portions of the Building or Project to be demised to tenants or for any subsequent improvements to such tenants' spaces; (vii) advertising expenses relating to vacant space; (viii) real estate brokers' or other leasing commissions; (ix) Landlord's costs of any services provided to tenants or other occupants for which Landlord is actually reimbursed by such tenants or other occupants (other than reimbursement through Basic Operating Costs) as an additional charge or rental over and above the basic rent (and escalations thereof) payable under the lease with such tenant or other occupant; (x) costs in connection with services that are provided to another tenant or occupant of the Project, but are not offered to Tenant; (xi) costs (i.e., interest and penalties) incurred due to Landlord's default of this Lease or any other lease, mortgage, or other agreement, in each case affecting the Building or Project; (xii) payments to subsidiaries or affiliates of Landlord, or to any other party, in each case as a result of a non-arm's length transaction, for management or other

services for the Building or Project, or for supplies or other materials for the Building or Project, to the extent that such payments exceed arm's length competitive prices in the market where the Leased Premises are located for the services, supplies or materials provided; (xiii) Landlord's legal existence and general corporate overhead and general administrative expenses; (xiv) interest upon loans to Landlord or secured by a mortgage or deed of trust covering the Project or a portion thereof or any other debt of Landlord; (xv) rental payments under any ground lease; (xvi) costs incurred directly and solely as a result of Landlord's gross negligence or willful misconduct; (xvii) salaries of employees of Landlord above those performing property management and facilities management duties for the Project; (xviii) salaries of executive officers of Landlord; depreciation claimed by Landlord for tax purposes; (xix) costs or expenses incurred in connection with the financing or sale of the Project or any portion thereof; (xx) costs expressly excluded from Basic Operating Costs elsewhere in this Lease or that are charged to or paid by Tenant under other provisions of this Lease; (xxi) political and charitable contributions; (xxii) costs of environmental testing, monitoring, removal or remediation of any Hazardous Materials in the Building or the Project that are in existence at the Building or Project prior to the Term Commencement Date except to the extent caused by Tenant; (xxiii) the costs of acquiring investment-grade art; and (xxiv) any item that, if included in Basic Operating Costs, would involve a double collection for such item by Landlord.

Article 4.
Landlord's Covenants

4.1. Basic Services.

(a) Tenant acknowledges that this Lease is a net lease, it being understood that Landlord shall receive the Base Rent specified in the Basic Lease Information sheet free and clear of any and all expenses, costs, impositions, taxes, assessments, liens or charges of any nature whatsoever, which shall be payable by Tenant unless otherwise set forth in this Lease. Accordingly, Tenant shall be solely responsible for and promptly pay the Landlord or the appropriate utility company directly for all water, gas, HVAC, light, power, telephone, and other utilities and services supplied to the Leased Premises for which there is a separate meter or submeter to the Leased Premises and Tenant shall pay Landlord for Tenant's share, as reasonably determined by Landlord, of all utilities and services furnished to the Leased Premises for which there is no separate meter or submeter and the foregoing utility and service expenses for the Leased Premises shall be paid by Tenant separately and shall not be part of Basic Operating Costs. With respect to janitorial, Tenant shall employ its own bonded and reputable janitorial service, subject to Landlord's reasonable prior written approval, to clean the Leased Premises on all business days, at Tenant's sole cost and expense. Subject to inclusion in Basic Operating Costs, Landlord agrees to furnish Tenant only with the following services: (i) exterior window cleaning, (ii) parking lot sweeping, (iii) landscaping, and (iv) structural and exterior maintenance (including exterior glass and glazing) and routine maintenance, repairs and electric lighting service for all public areas and service areas of the Project in the manner and to the extent deemed by Landlord to be standard. Notwithstanding anything in this Lease to the contrary, Tenant's use of electrical service shall not exceed, either in voltage, rated capacity, or overall load, its pro-rata share of the Building capacity.

(b) Landlord shall not be liable for damages to either person or property, nor shall Landlord be deemed to have evicted Tenant, nor shall there be any abatement of Rent, nor shall Tenant be relieved from performance of any covenant on its part to be performed under this Lease by reason

of any (i) deficiency in the provision of basic services; (ii) breakdown of equipment or machinery utilized in supplying services; or (iii) curtailment or cessation of services due to causes or circumstances beyond the reasonable control of Landlord or by the making of the necessary repairs or improvements, unless such deficiency, breakdown, curtailment or cessation is due to the active gross negligence or willful misconduct of Landlord. Landlord shall use reasonable diligence to make such repairs as may be required to machinery or equipment within the Project to provide restoration of services and, where the cessation or interruption of service has occurred due to circumstances or conditions beyond Project boundaries, to cause the same to be restored, by diligent application or request to the provider thereof.

(c) With respect to HVAC, HVAC shall be available during Building hours of operation (which Building hours of operation is 7:00 a.m. to 6:00 p.m., Monday through Friday (excluding holidays)) for the Leased Premises (excluding rooms and areas serviced by any supplemental HVAC system installed by Tenant) in a manner sufficient to maintain an indoor air quality within the limits required for office use by the American Society of Heating, Air Conditioning and Refrigeration Engineers (ASHRAE) standard 62-2007 and sufficient to maintain operating temperatures for office use recommended by the ASHRAE Standard 55—2010 (collectively, the “ASHRAE Standard”).

4.2. Extra Services.

(a) The cost chargeable to Tenant for all extra services requested by Tenant in writing and provided by Landlord, if any, shall constitute Additional Rent and shall include a management fee payable to Landlord of ten percent (10%). Additional Rent shall be paid monthly by Tenant to Landlord concurrently with the payment of Base Rent.

(b) HVAC utilized by Tenant during hours other than the Building hours of operation on weekdays, or on Saturdays, Sundays, or holidays, or any HVAC unit operated outside of the ASHRAE Standard shall be over and beyond the basic HVAC service to be made available by Landlord under this Lease; provided, however, that because Tenant will be billed by Landlord or the utility company for Tenant’s actual energy use of the HVAC system serving the Leased Premises, there will be no additional charge for HVAC under this Section 4.2(b) other than estimated charges for any decrease in the useful life of the HVAC system attributable to such after-hours usage or operation of the HVAC system outside of the ASHRAE Standard, as reasonably determined by Landlord.

4.3. Window Coverings. All window coverings for the Leased Premises shall be those approved by Landlord. Tenant shall not place or maintain any window coverings, blinds, curtains or drapes other than those approved by Landlord on any exterior window without Landlord’s prior written approval, which Landlord shall have the right to grant or withhold in its absolute and sole discretion.

4.4. Graphics and Signage. All signs, notices, advertisements and graphics of every kind or character, visible in or from the Common Areas or the exterior of the Leased Premises shall be subject to Landlord’s prior written approval, which Landlord shall have the right to withhold in its absolute and sole discretion. Landlord may remove, without notice to and at the expense of Tenant, any sign, notice, advertisement or graphic of any kind inscribed, displayed or affixed in violation of

the foregoing requirement. All approved signs, notices, advertisements or graphics shall be printed, affixed or inscribed at Tenant's expense by a sign company selected by or approved by Landlord. Landlord shall be entitled to revise the Project graphics and signage standards at any time. Subject to the foregoing, the originally-named Tenant in this Lease and its Permitted Transferees (as defined in Section 5.6(i) below) shall have the right, at Tenant's sole expense, to place and maintain one (1) corporate sign on the Building parapet; the originally-named Tenant and/or its Permitted Transferee shall lose the foregoing signage right in the event it assigns this Lease (other than to a Permitted Transferee) or subleases more than fifty percent (50%) of the Leased Premises (other than to a Permitted Transferee). In addition, the originally-named Tenant in this Lease and its Permitted Transferees shall have the non-exclusive right, at Tenant's sole expense, to place a sign panel on the sign monument for the Project, such sign panel position as assigned by Landlord; the originally-named Tenant and/or its Permitted Transferee shall lose the foregoing signage right in the event it assigns this Lease (other than to a Permitted Transferee) or subleases more than fifty percent (50%) of the Leased Premises (other than to a Permitted Transferee). Tenant shall remove Tenant's Building parapet sign and monument sign panel and repair any damage caused by the installation or removal of such signage (and with respect to Tenant's Building parapet sign, Tenant shall restore the Building parapet to the condition existing prior to installation of such sign, subject to ordinary wear and tear) at the expiration or earlier termination of this Lease. Installation, fabrication, maintenance and removal of Tenant's Building parapet sign and sign panel shall be at Tenant's sole cost and expense.

4.5. Intentionally deleted.

4.6. Repair Obligation. Landlord's obligation under this Lease with respect to maintenance, repair, and replacement shall be limited to (i) the structural portions of the Building, including the foundation; (ii) the exterior walls of the Building; (iii) the exterior roof and roof membrane; (iv) the Common Areas; (v) the Project parking area; and (vi) landscaped areas, if any. However, Landlord shall not have any obligation to repair damage caused by Tenant, its agents, employees, contractors, invitees or licensees. Landlord shall have the right, but not the obligation, to undertake work of repair which Tenant is required to perform under this Lease and which Tenant fails or refuses to perform in a timely and efficient manner after Tenant's receipt of written notice. Tenant shall reimburse Landlord upon demand, as Additional Rent, for all costs incurred by Landlord in performing any such repair for the account of Tenant, together with an amount equal to five percent (5%) of such costs to reimburse Landlord for its administration and managerial effort. Except as specifically set forth in this Lease, Landlord shall have no obligation whatsoever to maintain or repair the Leased Premises or the Project. The parties intend that the terms of this Lease govern their respective maintenance and repair obligations. Tenant expressly waives the benefit of any statute now or hereafter in effect to the extent it is inconsistent with the terms of this Lease with respect to such obligations or which affords Tenant the right to make repairs at the expense of Landlord or terminate this Lease by reason of the condition of the Leased Premises or any needed repairs. All costs in performing the work described in this Section shall be included in Basic Operating Costs.

Article 5. Tenant's Covenants

5.1. Payments by Tenant. Tenant shall pay Rent at the times and in the manner provided in this Lease. All obligations of Tenant hereunder to make payments to Landlord shall constitute Rent and failure to pay the same when due shall give rise to the rights and remedies provided for in Section 7.8. If Tenant consists of more than one person or entity, the obligations imposed under this Lease upon all such persons or entities shall be joint and several.

5.2. Tenant Improvements. The Tenant Improvements, if any, shall be installed and constructed pursuant to **Exhibit B**.

5.3. Taxes on Personal Property. In addition to, and wholly apart from its obligation to pay Tenant's Proportionate Share of Basic Operating Costs, Tenant shall be responsible for, and shall pay prior to delinquency, all taxes or governmental service fees, possessory interest taxes, fees or charges in lieu of any such taxes, capital levies, and any other charges imposed upon, levied with respect to, or assessed against Tenant's personal property, and on its interest pursuant to this Lease. To the extent that any such taxes are not separately assessed or billed to Tenant, Tenant shall pay the amount thereof as invoiced to Tenant by Landlord.

5.4. Repairs by Tenant.

(a) Tenant shall be obligated to maintain, replace, and repair, at Tenant's sole cost and expense, the Leased Premises (including all restrooms, mechanical, electrical, plumbing and life safety systems serving the Leased Premises and Tenant's personal property, trade fixtures and any improvements or alterations installed by or on behalf of Tenant), to keep the same at all times in good order, condition and repair, and, upon expiration of the Term, to surrender the same to Landlord in the same condition as on the Term Commencement Date, reasonable wear and tear, taking by condemnation, and damage by casualty not caused by Tenant, its agents, employees, contractors, invitees and licensees excepted. Tenant's obligations shall include, without limitation, the obligation to maintain and repair all walls, floors, ceilings and fixtures and to repair all damage caused by Tenant, its agents, employees, contractors, invitees and others using the Leased Premises with Tenant's expressed or implied permission. At the request of Tenant, but without obligation to do so, Landlord may perform the work of maintenance and repair constituting Tenant's obligation under this Section 5.4 at Tenant's sole cost and expense and as an extra service to be rendered pursuant to Section 4.2 if requested by Tenant in writing. Any work of repair and maintenance performed by or for the account of Tenant by persons other than Landlord shall be performed by contractors approved by Landlord and in accordance with procedures Landlord shall from time to time reasonably establish. Tenant shall give Landlord prompt notice of any damage to or defective condition in any part of the mechanical, electrical, plumbing, life safety or other system servicing or located in the Leased Premises of which Tenant is actually aware.

(b) Notwithstanding anything in this Lease to the contrary, Tenant shall enter into and continue in force throughout the term of this Lease a regularly scheduled (at least once every three (3) months) preventive maintenance/service contract, with a maintenance contractor reasonably approved by Landlord, for servicing all HVAC units serving the Leased Premises, and shall promptly provide a copy of the contract to Landlord. The service contract must include, at a minimum, all services suggested by the equipment manufacturer. At Landlord's option, Landlord shall have the right to enter into such contract on behalf of Tenant, and Tenant shall pay Landlord, as Additional Rent hereunder, the cost thereof Tenant shall be responsible for any repair or necessary replacement of such HVAC units during the Term.

5.5. Waste. Tenant shall not commit or allow any waste or damage to be committed in any portion of the Leased Premises or the Project.

5.6. Assignment or Sublease.

(a) Tenant shall not voluntarily or by operation of law assign, transfer or encumber (collectively "Assign") or sublet all or any part of Tenant's interest in this Lease or in the Leased Premises without Landlord's prior written consent given under and subject to the terms of this Section 5.6.

(b) If Tenant desires to Assign this Lease or any interest herein or sublet the Leased Premises or any part thereof, Tenant shall give Landlord a request for consent to such transaction, in writing (the "Transfer Request"). Tenant's Transfer Request shall specify the date the proposed assignment or sublease would be effective and be accompanied by information pertinent to Landlord's determination as to the financial and operational responsibility and appropriateness of the proposed assignee or subtenant, including, without limitation, its name, business and financial condition, financial details of the proposed transfer, the intended use (including any modification) of the Leased Premises, and exact copies of all of the proposed agreement(s) between Tenant and the proposed assignee or subtenant. Tenant shall promptly provide Landlord with (i) such other or additional information or documents reasonably requested (within ten (10) days after receiving Tenant's Transfer Request) by Landlord, and (ii) an opportunity to meet and interview the proposed assignee or subtenant, if requested by Landlord.

(c) Landlord shall have a period of ten (10) business days following such interview and receipt of all such additional information (or thirty (30) days from the date of Tenant's Transfer Request if Landlord does not request additional information or an interview) within which to notify Tenant in writing that Landlord elects either (i) to terminate this Lease as to the space that is the subject of the Transfer Request as of the effective date of the proposed assignment or sublease specified by Tenant in the Transfer Request (the "Recapture Notice"), in which event Tenant will be relieved of all further obligations hereunder as to such space as of such date, other than those obligations which survive termination of the Lease (provided that if Landlord elects to terminate the Lease with respect to a partial sublease of the Leased Premises, such termination shall have no effect if, within fifteen (15) days after Landlord delivers the Recapture Notice, Tenant elects by written notice to Landlord to rescind its original Transfer Request, in which case and the Lease shall continue in full force and effect as if such Transfer Request and Recapture Notice had never been delivered; for avoidance of doubt, if the Transfer Request is for all [or materially all] of the Leased Premises and Landlord delivers a Recapture Notice, Tenant has no right to rescind the original Transfer Notice), or (ii) to approve or disapprove Tenant's request to Assign this Lease or sublet such space, subject, however, to prior written approval of the proposed assignee or sublessee by Landlord, such consent not to be unreasonably withheld so long as the use of the Leased Premises by such proposed assignee or sublessee would be a Permitted Use, the proposed assignee or sublessee is of sound financial condition as determined by Landlord in its absolute and sole discretion, the proposed assignee or sublessee executes such reasonable assumption documentation as Landlord shall require. Failure by Landlord to approve a proposed subtenant or assignee shall not cause a termination of this Lease.

(d) In the event Tenant shall request the consent of Landlord to any assignment or subletting hereunder, Tenant shall pay Landlord a processing fee of \$1,500.00 Such fee shall be deemed Additional Rent under this Lease.

(e) Any rent or other consideration realized by Tenant under any such sublease or assignment in excess of (i) the proportionate Rent payable for the applicable subleased space, (ii) any reasonable tenant improvement allowance or other economic concession (e.g., space planning allowance, moving expenses, free or reduced rent periods, etc.), and (iii) any advertising costs, legal fees, and brokerage commissions associated with such assignment or sublease ("Profit"), shall be divided and paid as follows: fifty percent (50%) to Tenant and fifty percent (50%) to Landlord; provided, however, that if Tenant is in default hereunder beyond any applicable cure period, Landlord shall be entitled to all such Profit during such default.

(f) [intentionally deleted].

(g) The consent of Landlord to any assignment or subletting shall not constitute a consent to any subsequent assignment or subletting by Tenant or to any subsequent or successive assignment or subletting by the assignee or subtenant.

(h) No assignment or subletting by Tenant shall relieve Tenant of any obligation under this Lease. In the event of default by an assignee or subtenant of Tenant or any successor of Tenant in the performance of any of the terms hereof, Landlord may proceed directly against Tenant without the necessity of exhausting remedies against such assignee, subtenant or successor. Any assignment or subletting made without Landlord's consent or which conflicts with the provisions hereof shall be void and, at Landlord's option, shall constitute a default under this Lease.

(i) Notwithstanding the foregoing, without Landlord's consent (but Tenant will provide at least ten (10) days prior written notice to Landlord [unless such prior notice is prohibited by applicable law or a binding confidentiality agreement between Tenant and the entity acquiring Tenant, in which event Tenant shall provide such notice as soon as permitted by applicable law or pursuant to the confidentiality agreement] and Tenant will promptly provide Landlord with any documents or information reasonably requested by Landlord regarding such transaction), Tenant may Assign this Lease or sublet all or any portion of the Leased Premises to (i) any person or entity which, directly or indirectly, controls Tenant or is controlled by Tenant or is under common control with Tenant, (ii) any successor to Tenant by merger, consolidation or operation of law, or (iii) any person or entity to whom all or substantially all of Tenant's assets are conveyed as long as the assignee has a net worth sufficient to meet the obligations being assumed (each, a "Permitted Transferee" and collectively, the "Permitted Transferees").

5.7. Alterations, Additions and Improvements.

(a) Tenant shall not make or allow to be made any alterations or additions in or to the Leased Premises without first obtaining the written consent of Landlord, provided that Tenant shall be permitted, without Landlord's consent, to make non-structural alterations or additions to the Leased Premises that do not affect any of the Building systems, cost less than \$50,000.00 (in the aggregate per project), do not require a building permit, and are of a cosmetic nature (e.g., painting, carpeting, etc.; any such alteration complying with all of the foregoing constituting a "Cosmetic

Alteration”). Landlord’s consent will not be unreasonably withheld with respect to proposed alterations and additions which (i) comply with all applicable laws, ordinances, rules and regulations; (ii) are compatible with and does not adversely affect the Building and its mechanical, telecommunication, electrical, HVAC and life safety systems; (iii) will not affect the structural or exterior portions of the Building; (iv) will not interfere with the use and occupancy of any other portion of the Project by any other tenant, its employees or invitees; and (v) will not trigger any additional costs to Landlord. Specifically, but without limiting the generality of the foregoing, Landlord’s right of consent shall encompass plans and specifications for the proposed alterations or additions, construction means and methods, the identity of any contractor or subcontractor to be employed on the work of alterations or additions, and the time for performance of such work. Tenant shall supply to Landlord any additional documents and information requested by Landlord in connection with Tenant’s request for consent hereunder. If Tenant performs any alterations or additions permitted under this Section 5.7, Tenant shall, in addition to complying with the provisions of this Section 5.7, perform such alterations or additions in a manner that avoids disturbing any asbestos containing materials present in the Building. If asbestos containing materials are likely to be disturbed in the course of such work, Tenant shall encapsulate or remove the asbestos containing materials in accordance with an asbestos-removal plan approved by Landlord and otherwise in accordance with all applicable laws.

(b) Any consent given by Landlord under this Section 5.7 shall be deemed conditioned upon: (i) Tenant’s acquiring all applicable permits required by governmental authorities; (ii) Tenant’s furnishing to Landlord copies of such permits, together with copies of the approved plans and specifications, prior to commencement of the work thereon; and (iii) the compliance by Tenant with the conditions of all applicable permits and approvals in a prompt and expeditious manner.

(c) Tenant shall provide Landlord with not less than fifteen (15) days prior written notice of commencement of the work (including a Cosmetic Alteration) so as to enable Landlord to post and record appropriate notices of non-responsibility. All alterations and additions permitted hereunder shall be made and performed by Tenant without cost or expense to Landlord and in strict accordance with plans and specifications approved by Landlord. Tenant shall pay the contractors and suppliers all amounts due to them when due and keep the Leased Premises and the Project free from any and all mechanics’, materialmen’s and other liens and claims arising out of any work performed, materials furnished or obligations incurred by or for Tenant. Landlord may require, at its sole option, that Tenant provide to Landlord, at Tenant’s expense, a lien and completion bond in an amount equal to the total estimated cost of any alterations, additions or improvements to be made in or to the Leased Premises, to protect Landlord against any liability for mechanics’, materialmen’s and other liens and claims, and to ensure timely completion of the work. In the event any alterations or additions to the Leased Premises are performed by Landlord hereunder, whether by prearrangement or otherwise, Landlord shall be entitled to charge Tenant a fifteen percent (15%) administration fee in addition to the actual costs of labor and materials provided. Such costs and fees shall be deemed Additional Rent under this Lease, and may be charged and payable prior to commencement of the work.

(d) Any and all alterations, additions or improvements made to the Leased Premises by Tenant shall become the property of Landlord upon installation (other than those set forth on **Exhibit F** attached hereto) and shall be surrendered to Landlord without compensation to Tenant upon the termination of this Lease by lapse of time or otherwise unless (i) Landlord conditioned its approval of such alterations, additions or improvements on Tenant’s agreement to remove them, or

(ii) if Tenant did not provide a Removal Determination Request (as defined below), Landlord notifies Tenant prior to (or promptly after) the Term Expiration Date that the alterations, additions and/or improvements must be removed, in which case Tenant shall, by the Term Expiration Date, remove such alterations, additions and improvements, repair any damage resulting from such removal and restore the Leased Premises to their condition existing prior to the date of installation of such alterations, additions and improvements, ordinary wear and tear excepted. Prior to making any alterations, additions or improvements to the Leased Premises, Tenant may make a written request that Landlord determine in advance whether or not Tenant must remove such alterations, additions or improvements on or prior to the Term Expiration Date or any earlier termination of this Lease ("Removal Determination Request"). Notwithstanding anything to the contrary set forth above, this clause shall not apply to movable equipment, furniture, trade fixtures or other personal property owned by Tenant. Tenant shall repair at its sole cost and expense all damage caused to the Leased Premises and the Project by removal of Tenant's movable equipment or furniture and such other alterations, additions and improvements as Tenant shall be required or allowed by Landlord to remove from the Leased Premises.

(e) All alterations, additions and improvements permitted under this Section 5.7 shall be constructed diligently, in a good and workmanlike manner with new, good and sufficient materials and in compliance with all applicable laws, ordinances, rules and regulations (including, without limitation, building codes and those related to accessibility and use by individuals with disabilities). Tenant shall, promptly upon completion of the work, furnish Landlord with "as built" drawings for any alterations, additions or improvements performed under this Section 5.7.

(f) Tenant shall have the right to install a wireless intranet, internet, and communications network (also known as "Wi-Fi") within the Leased Premises for the use of Tenant and its employees (the "Network") subject to this subsection and all the other clauses of this Lease as are applicable. Tenant shall not solicit, suffer, or permit other tenants or occupants of the Building to use the Network or any other communications service, including, without limitation, any wired or wireless internet service that passes through, is transmitted through, or emanates from the Leased Premises. Tenant agrees that Tenant's communications equipment and the communications equipment of Tenant's service providers located in or about the Leased Premises, including, without limitation, any antennas, switches, or other equipment (collectively, "Tenant's Communications Equipment") shall be of a type and, if applicable, a frequency that will not cause radio frequency, electromagnetic, or other interference to any other party or any equipment of any other party including, without limitation, Landlord, other tenants, or occupants of the Building or any other party. In the event that Tenant's Communications Equipment causes or is believed to cause any such interference, upon receipt of notice from Landlord of such interference, Tenant will take all steps necessary, at Tenant's sole cost and expense, to correct and eliminate the interference. If the interference is not eliminated within 24 hours (or a shorter period if Landlord believes a shorter period to be appropriate) then, upon request from Landlord, Tenant shall shut down the Tenant's Communications Equipment pending resolution of the interference, with the exception of intermittent testing upon prior notice to and with the approval of Landlord.

5.8. Compliance With Laws and Insurance Standards. Tenant shall not occupy or use, or permit any portion of the Leased Premises to be occupied or used in a manner that violates any applicable law, ordinance, rule, regulation, order, permit, covenant, easement or restriction of record, or the reasonable recommendations of Landlord's engineers or consultants, relating in any manner to

the Project, or for any business or purpose which is disreputable, objectionable or productive of fire hazard. Tenant shall not do or permit anything to be done which would result in the cancellation, or in any way increase the cost, of the property insurance coverage on the Project and/or its contents. If Tenant does or permits anything to be done which increases the cost of any insurance covering or affecting the Project, then Tenant shall reimburse Landlord, upon demand, as Additional Rent, for such additional costs. Landlord shall deliver to Tenant a written statement setting forth the amount of any such insurance cost increase and showing in reasonable detail the manner in which it has been computed. Tenant shall, at Tenant's sole cost and expense, comply with all laws, ordinances, rules, regulations and orders (state, federal, municipal or promulgated by other agencies or bodies having or claiming jurisdiction) related to the use, condition or occupancy of the Leased Premises now in effect or which may hereafter come into effect including, but not limited to, (a) accessibility and use by individuals with disabilities, and (b) environmental conditions in, on or about the Leased Premises. If anything done by Tenant in its use or occupancy of the Leased Premises shall create, require or cause imposition of any requirement by any public authority for structural or other upgrading of or alteration or improvement to the Project, Tenant shall, at Landlord's option, either perform the upgrade, alteration or improvement at Tenant's sole cost and expense or reimburse Landlord upon demand, as Additional Rent, for the cost to Landlord of performing such work.

5.9. No Nuisance; No Overloading. Tenant shall use and occupy the Leased Premises, and control its agents, employees, contractors, invitees and visitors in such manner so as not to create any nuisance, or interfere with, or unreasonably annoy or disturb (whether by noise, odor, vibration or otherwise) any other tenant or occupant of the Project or Landlord in its operation of the Project. Tenant shall not place or permit to be placed any loads upon the floors, walls or ceilings in excess of the maximum designed load specified by Landlord or which might damage the Leased Premises, the Building, or any portion thereof.

5.10. Furnishing of Financial Statements; Tenant's Representations. In order to induce Landlord to enter into this Lease, Tenant agrees that it shall promptly furnish Landlord, from time to time, within ten (10) business days of receipt of Landlord's written request therefor, with financial statements in form and substance reasonably satisfactory to Landlord reflecting Tenant's current financial condition; provided that Landlord shall not make such request more than twice in any calendar year during the Term. Tenant represents and warrants that all financial statements, records and information furnished by Tenant to Landlord in connection with this Lease are true, correct and complete in all material respects.

5.11. Entry by Landlord. Landlord, its employees, agents and consultants, shall have the right to enter the Leased Premises at any time, in cases of an emergency, and otherwise during normal business hours after at least 24 hours' prior notice to Tenant (which notice may be telephonic, via email, or in person) to inspect the same, to clean, to perform such work as may be permitted or required under this Lease, to make repairs to or alterations of the Leased Premises or other portions of the Project or other tenant spaces therein, to deal with emergencies, to post such notices as may be permitted or required by law to prevent the perfection of liens against Landlord's interest in the Project or to show the Leased Premises to prospective tenants, purchasers, encumbrancers or others, or for any other purpose as Landlord may deem reasonably necessary or desirable. Notwithstanding anything to the contrary in this Lease, except in case of an emergency Landlord shall not be entitled to access any areas of the Leased Premises that are scientifically sensitive, as reasonably determined by Tenant, and Tenant may elect to have all access to the Leased Premises by Landlord accompanied

by a designee of Tenant. Notwithstanding the foregoing, in the event that Tenant will not be extending the Term, Landlord may show such scientifically sensitive areas to prospective tenants during the last six (6) months of the Term, subject to Tenant's reasonable procedures and subject to the prospective tenant(s) being accompanied by a designee of Tenant. Tenant shall not be entitled to any abatement of Rent or damages by reason of the exercise of any such right of entry or performance of any such work by Landlord.

5.12. Nondisturbance and Attornment.

(a) This Lease and the rights of Tenant hereunder shall be subject and subordinate to the lien of any deed of trust, mortgage, ground lease or other hypothecation or security instrument (collectively, "Security Device") now or hereafter placed upon, affecting or encumbering the Project or any part thereof or interest therein, and to any and all advances made thereunder, interest thereon or costs incurred and any modifications, renewals, supplements, consolidations, replacements and extensions thereof. Without the consent of Tenant, the holder of any such Security Device or the beneficiary thereunder shall have the right to elect to be subject and subordinate to this Lease, such subordination to be effective upon such terms and conditions as such holder or beneficiary may direct which are not inconsistent with the provisions hereof. Tenant agrees to attorn to and recognize as the Landlord under this Lease the holder or beneficiary under a Security Device or any other party that acquires ownership of the Leased Premises by reason of a foreclosure or sale under any Security Device (or deed in lieu thereof). The new owner following such foreclosure, sale or deed shall not be (i) liable for any act or omission of any prior landlord or with respect to events occurring prior to acquisition of ownership; (ii) subject to any offsets or defenses which Tenant might have against any prior landlord; (iii) bound by prepayment of more than one (1) month's Rent; or (iv) liable to Tenant for any security deposit not actually received by such new owner. Tenant covenants and agrees to execute (and acknowledge if required by Landlord, any lender or ground lessor) and deliver, within ten (10) business days of a written demand or request by Landlord and in the form reasonably requested by Landlord, ground lessor, mortgagee or beneficiary, any additional documents evidencing the priority or subordination of this Lease with respect to any such ground leases or underlying leases or the lien of any such mortgage or deed of trust.

(b) After this Lease is fully-executed and delivered by the parties, Landlord agrees to use commercially reasonable, good faith efforts to obtain a nondisturbance agreement for Tenant from the existing lender of the Project, on such lender's standard form; Tenant shall, at its sole cost, be responsible to pay for any fees and expenses charged by the existing lender in connection with obtaining a nondisturbance agreement.

Tenant shall not unreasonably withhold its consent to changes or amendments to this Lease requested by the holder of a Security Device so long as these changes do not alter the basic business terms of this Lease or otherwise materially diminish any rights or materially increase any obligations of Tenant hereunder. If, within ten (10) business days after notice from Landlord, Tenant fails or refuses to execute with Landlord the amendment(s) to this Lease accomplishing the change(s) or amendment(s) which are requested by such holder, Landlord, at its sole option, shall have the right to immediately terminate this Lease.

5.13. Estoppel Certificate. Within ten (10) business days following Landlord's request, Tenant shall execute, acknowledge and deliver written estoppel certificates addressed to (i) any

mortgagee or prospective mortgagee of Landlord, or (ii) any purchaser or prospective purchaser of all or any portion of, or interest in, the Project, on a form specified by Landlord, certifying as to such facts (if true) and agreeing to such notice provisions and other matters as such mortgagee(s) or purchaser(s) may reasonably require, including, without limitation, the following: (a) that this Lease is unmodified and in full force and effect (or in full force and effect as modified, and stating the modifications); (b) the amount of, and date to which Rent and other charges have been paid in advance; (c) the amount of any Security Deposit; and (d) acknowledging that Landlord is not in default under this Lease (or, if Landlord is claimed to be in default, stating the nature of the alleged default). Any such estoppel certificate may be relied upon by any such mortgagee or purchaser. Failure by Tenant to execute and deliver any such estoppel certificate within the time requested shall, at Landlord's election, constitute a default hereunder and shall be conclusive upon Tenant that (1) this Lease is in full force and effect and has not been modified except as represented by Landlord; (2) not more than one month's Rent has been paid in advance; and (3) Landlord is not in default under this Lease.

5.14. Security Deposit.

(a) Concurrently with the execution hereof, Tenant shall pay to Landlord the agreed upon Security Deposit as security for the full and faithful performance of Tenant's obligations under this Lease. If at any time during the Term, Tenant shall be in default in the payment of Rent or in default for any other reason, Landlord may use, apply or retain all or part of the Security Deposit for payment of any amount due Landlord or to cure such default or to reimburse or compensate Landlord for any liability, loss, cost, expense or damage (including attorneys' fees) which Landlord may suffer or incur by reason of Tenant's defaults. If Landlord uses or applies all or any part of the Security Deposit, Tenant shall, on demand, pay to Landlord a sum sufficient to restore the Security Deposit to the full amount required by this Lease. Upon expiration of the Term or earlier termination of this Lease and after Tenant has vacated the Leased Premises, Landlord shall return the Security Deposit to Tenant, reduced by such amounts as may be required by Landlord to remedy defaults on the part of Tenant in the payment of Rent, to repair damages to the Leased Premises caused by Tenant and to clean the Leased Premises. The portion of the deposit not so required shall be paid over to Tenant (or, at Landlord's option, to the last assignee of Tenant's interest in this Lease) within thirty (30) days after expiration of the Term or earlier termination hereof. Landlord shall hold the Security Deposit for the foregoing purposes; provided, however, that Landlord shall have no obligation to segregate the Security Deposit from its general funds or to pay interest in respect thereof. No part of the Security Deposit shall be considered to be held in trust, or to be prepayment of any monies to be paid by Tenant under this Lease. Tenant hereby waives (i) the protections of Section 1950.7 of the California Civil Code, as it may hereafter be amended and any and all other laws, rules and regulations applicable to security deposits in the commercial context ("Security Deposit Laws"), and (ii) any and all rights, duties and obligations either party may now or, in the future, will have relating to or arising from the Security Deposit Laws. Notwithstanding anything to the contrary herein, the Security Deposit may be retained and applied by Landlord (a) to offset Rent which is unpaid either before or after termination of this Lease, and (b) against other damages suffered by Landlord before or after termination of this Lease.

(b) Instead of a cash deposit, Tenant shall deliver the Security Deposit to Landlord in the form of a clean and irrevocable letter of credit (the "Letter of Credit") issued by and drawable upon (said issuer being referred to as the "Issuing Bank") a financial institution which is reasonably

approved by Landlord. Such Letter of Credit shall (a) name Landlord as beneficiary, (b) be in the amount of the Security Deposit, (c) have a term of not less than one year, (d) permit multiple drawings, (e) be fully transferable by Landlord, and (f) otherwise be in form and content reasonably satisfactory to Landlord. If upon any transfer of the Letter of Credit, any fees or charges shall be so imposed, then such fees or charges shall be payable solely by Tenant and the Letter of Credit shall so specify and if the Issuing Bank will not agree to the transfer (or if it imposes unreasonable requirements for the transfer), Tenant shall promptly replace such Letter of Credit. The Letter of Credit shall provide that it shall be deemed automatically renewed, without amendment, for consecutive periods of one year each thereafter during the Term unless the Issuing Bank sends a notice (the "Non-Renewal Notice") to Landlord by certified mail, return receipt requested, not less than 45 days next preceding the then expiration date of the Letter of Credit stating that the Issuing Bank has elected not to renew the Letter of Credit. Landlord shall have the right, upon receipt of the Non-Renewal Notice, to draw the full amount of the Letter of Credit, by sight draft on the Issuing Bank, and shall thereafter hold or apply the cash proceeds of the Letter of Credit pursuant to the terms of this Section 5.14. The Issuing Bank shall agree with all drawers, endorsers and bona fide holders that drafts drawn under and in compliance with the terms of the Letter of Credit will be duly honored upon presentation to the Issuing Bank at an office location in the San Francisco Bay Area. Notwithstanding the foregoing, Landlord hereby approves JPMorgan Chase & Co. as an Issuing Bank.

(c) Notwithstanding anything in this Section 5.14 to the contrary, if Tenant delivers to Landlord reasonable written evidence that it has cash and cash equivalent assets equal to at least twelve (12) months of operating expenses for the company, on the last day of the sixtieth (60th) full calendar month after the Term Commencement Date, the Security Deposit shall be reduced from \$992,437.58 to \$595,462.55; provided, however, upon the occurrence of an Event of Default (beyond any applicable notice and cure periods), any unexercised right to reduce the Security Deposit shall automatically terminate and be of no further force or effect and the initial required Security Deposit shall remain for the remainder of the Lease Term. Subject to the foregoing, Tenant shall have the right to reduce the Letter of Credit amount via the delivery to Landlord of either (i) an amendment to the existing Letter of Credit (in form and content reasonably acceptable to Landlord) reducing the Letter of Credit amount to the amount set forth above, or (ii) an entirely new Letter of Credit (in the form and content required by this Section 5.14) in the Letter of Credit amount then required as set forth above. If applicable, Landlord shall cooperate with Tenant in executing such authorizations as the Issuing Bank may require to accomplish any such reduction.

5.15. Surrender.

(a) Subject to the provisions of Section 5.7 hereof, on the Term Expiration Date (or earlier termination of this Lease), Tenant shall quit and surrender possession of the Leased Premises to Landlord in broom clean condition and as good order and condition as they were in on the Delivery Date, reasonable wear and tear, casualty damage, taking by condemnation and damage by casualty not caused by Tenant, its agents, employees, contractors, invitees and licensees excepted. Reasonable wear and tear shall not include any damage or deterioration that would have been prevented by good maintenance practice or by Tenant performing all of its obligations under this Lease. Tenant shall, without cost to Landlord, remove all furniture, equipment, trade fixtures, debris and articles of personal property owned by Tenant in the Leased Premises (including, without limitation, all items set forth on **Exhibit F** attached hereto), and shall repair any damage to the Project resulting from such removal. Any such property not removed by Tenant by the Term Expiration Date

(or earlier termination of this Lease) shall be considered abandoned, and Landlord may remove any or all of such items and dispose of same in any lawful manner or store same in a public warehouse or elsewhere for the account and at the expense and risk of Tenant. If Tenant shall fail to pay the cost of storing any such property after storage for thirty (30) days or more, Landlord may sell any or all of such property at public or private sale, in such manner and at such times and places as Landlord may deem proper, without notice to or demand upon Tenant. Landlord shall apply the proceeds of any such sale as follows: first, to the costs of such sale; second, to the costs of storing any such property; third, to the payment of any other sums of money which may then or thereafter be due to Landlord from Tenant under any of the terms of this Lease; and fourth, the balance, if any, to Tenant.

(b) In addition, on the Term Expiration Date (or earlier termination of this Lease), Tenant shall remove, at its sole cost and expense, all of Tenant's telecommunications lines and cabling installed by Tenant, including, without limitation, any such lines and cabling installed in the plenum or risers of the Building in compliance with the National Electrical Code (collectively, "Wires") and repair all damage caused thereby and restore the Leased Premises or the Building, as the case may be, to their condition existing prior to the installation of the Wires ("Wire Restoration Work"). Landlord, at its option, may perform such Wire Restoration Work at Tenant's sole cost and expense. In the event that Tenant fails to perform the Wire Restoration Work or refuses to pay all costs of the Wire Restoration Work (if performed by Landlord) within ten (10) days of Tenant's receipt of Landlord's notice requesting Tenant's reimbursement for or payment of such costs or otherwise fails to comply with the provisions of this Section, Landlord may apply all or any portion of the Security Deposit toward the payment of any costs or expenses relative to the Wire Restoration Work or Tenant's obligations under this Section. The retention or application of such Security Deposit (if any) by Landlord pursuant to this Section does not constitute a limitation on or waiver of Landlord's right to seek further remedy under law or equity. The provisions of this Section shall survive the expiration or sooner termination of this Lease.

5.16. Tenant's Remedies. Landlord shall not be deemed in breach of this Lease unless Landlord fails within a reasonable time to perform an obligation required to be performed by Landlord. For purposes of this Section 5.16, a reasonable time shall in no event, be less than thirty (30) days after receipt by Landlord, and by the holders of any ground lease, deed of trust or mortgage covering the Leased Premises whose name and address shall have been furnished Tenant in writing for such purpose, of written notice specifying wherein such obligation of Landlord has not been performed; provided, however, that if the nature of Landlord's obligation is such that more than thirty (30) days after such notice are reasonably required for its performance, then Landlord shall not be in breach of this Lease if performance is commenced within said thirty (30)-day period and thereafter diligently pursued to completion. If Landlord fails to cure such default within the time provided for in this Lease, the holder of any such ground lease, deed of trust or mortgage shall have an additional thirty (30) days to cure such default; provided that if such default cannot reasonably be cured within that thirty (30) day period, then such holder shall have such additional time to cure the default as is reasonably necessary under the circumstances. The liability of Landlord to Tenant for any default by Landlord under the terms of this Lease shall be limited to the actual interest of Landlord and its present or future partners or members in the Building, and Tenant agrees to look solely to Landlord's interest in the Building for satisfaction of any liability and shall not look to other assets of Landlord nor seek any recourse against the assets of the individual partners, members, directors, officers, shareholders, agents or employees of Landlord, including without limitation, any property management or asset management company of Landlord (collectively, the "Landlord Parties"). It is the parties' intention

that Landlord and the Landlord Parties shall not in any event or circumstance be personally liable, in any manner whatsoever, for any judgment or deficiency hereunder or with respect to this Lease. Landlord shall not be liable for any loss, injury or damage arising from any act or omission of any other tenant or occupant of the Project, nor shall Landlord be liable under any circumstances for damage or inconvenience to Tenant's business or for any loss of income or profit therefrom. The liability of Landlord under this Lease is limited to its actual period of ownership of title to the Building. Any lien obtained to enforce any such judgment and any levy of execution thereon shall be subject and subordinate to any lien, deed of trust or mortgage to which Section 5.12 applies or may apply. Tenant shall not have the right to terminate this Lease or withhold, reduce or offset any amount against any payments of Rent due and payable under this Lease by reason of a breach of this Lease by Landlord.

5.17. Rules and Regulations. Tenant shall comply with the rules and regulations for the Project attached as **Exhibit D** and such reasonable amendments thereto as Landlord may adopt from time to time with prior notice to Tenant.

Article 6. Environmental Matters

6.1. Hazardous Materials Prohibited.

(a) Tenant shall not cause or permit any Hazardous Material (as defined in Section 6.1(c) below) to be brought, kept, used, generated, released or disposed in, on, under or about the Leased Premises or the Project by Tenant, its agents, employees, contractors, licensees or invitees (collectively, "Tenant's Representatives"); provided, however, that Tenant may use, store and dispose of, in accordance with applicable Laws, limited quantities of standard office and janitorial supplies, but only to the extent reasonably necessary for Tenant's operations in the Leased Premises, and, if reasonably necessary for Tenant's operations in the Leased Premises, Tenant may use certain Hazardous Materials with Landlord's prior written consent and with reasonable safety procedures required by Landlord. Tenant hereby indemnifies Landlord from and against (i) any breach by Tenant of the obligations stated in the preceding sentence, (ii) any breach of the obligations stated in Section 6.1(b) below, or (iii) any claims or liability resulting from Tenant's use of Hazardous Materials. Tenant hereby agrees to defend and hold Landlord harmless from and against any and all claims, liability, losses, damages, costs and/or expenses (including, without limitation, diminution in value of the Project, or any portion thereof, damages for the loss or restriction on use of rentable or usable space or of any amenity of the Project, damages arising from any adverse impact on marketing of space in the Project, and sums paid in settlement of claims, fines, penalties, attorneys' fees, consultants' fees and experts' fees) which arise during or after the Term as a result of any breach of the obligations stated in Sections 6.1(a) or 6.1(b) or otherwise resulting from Tenant's use of Hazardous Materials. This indemnification of Landlord by Tenant includes, without limitation, death of or injury to person, damage to any property or the environment and costs incurred in connection with any investigation of site conditions or any cleanup, remedial, removal, or restoration work required by any federal, state or local governmental agency or political subdivision because of any Hazardous Material present in, on, under or about the Leased Premises or the Project (including soil and ground water contamination) which results from such a breach. Without limiting the foregoing, if the presence of any Hazardous Material in, on, under or about the Leased Premises or the Project caused or permitted by Tenant or Tenant's Representatives results in any contamination of the Leased

Premises or the Project, Tenant shall promptly take all actions at its sole expense as are necessary to return the same to the condition existing prior to the introduction of such Hazardous Material; provided that Landlord's approval of such actions, and the contractors to be used by Tenant in connection therewith, shall first be obtained. This indemnification of Landlord by Tenant shall survive the expiration or sooner termination of this Lease.

(b) Tenant covenants and agrees that Tenant shall at all times be responsible and liable for, and be in compliance with, all federal, state, local and regional laws, ordinances, rules, codes and regulations, as amended from time to time ("Governmental Requirements"), relating to health and safety and environmental matters, arising, directly or indirectly, out of the use of Hazardous Materials (as defined in Section 6.1(c) below) by Tenant in the Project. Health and safety and environmental matters for which Tenant is responsible under this paragraph include, without limitation (i) notification and reporting to governmental agencies, (ii) the provision of warnings of potential exposure to Hazardous Materials to Landlord and Tenant's agents, employees, licensees, contractors and others, (iii) the payment of taxes and fees, (iv) the proper off-site transportation and disposal of Hazardous Materials, and (v) all requirements, including training, relating to the use of equipment. Immediately upon discovery of a release of Hazardous Materials, Tenant shall give written notice to Landlord, whether or not such release is subject to reporting under Governmental Requirements. The notice shall include information on the nature and conditions of the release and Tenant's planned response. Tenant shall be liable for the cost of any clean-up of the release of any Hazardous Materials by Tenant or Tenant's Representatives on the Project.

(c) As used in this Lease, the term "Hazardous Material" means any hazardous or toxic substance, material or waste which is or becomes regulated by any local governmental authority, the State of California or the United States Government. The term "Hazardous Material" includes, without limitation, any substance, material or waste which is (i) defined as a "hazardous waste" or similar term under the laws of the jurisdiction where the Project is located; (ii) designated as a "hazardous substance" pursuant to Section 311 of the Federal Water Pollution Control Act (33 U.S.C. § 1317); (iii) defined as a "hazardous waste" pursuant to Section 1004 of the Federal Resource, Conservation and Recovery Act, 42 U.S.C. § 6901 et seq. (42 U.S.C. § 6903); (iv) defined as a "hazardous substance" pursuant to Section 101 of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601 et seq. (42 U.S.C. § 9601); (v) hydrocarbons, petroleum, gasoline, crude oil or any products, by-products or fractions thereof; or (vi) asbestos in any form or condition.

(d) As used in this Article 6, the term "Laws" means any applicable federal, state or local laws, ordinances, rules or regulations relating to any Hazardous Material affecting the Project, including, without limitation, the specific laws, ordinances and regulations referred to in Section 6.1(c) above. References to specific Laws shall also be references to any amendments thereto and to any applicable successor Laws.

6.2. Limitations on Assignment and Subletting. In addition to the provisions of Section 5.6 above, it shall not be unreasonable for Landlord to withhold its consent to any proposed assignment or subletting of the Leased Premises if (i) the proposed transferee's anticipated use of the Leased Premises involves the generation, storage, use, treatment, or disposal of Hazardous Material (excluding standard office and janitorial supplies; in limited quantities as hereinabove provided); (ii) the proposed transferee has been required by any prior landlord, lender or governmental authority to

take remedial action in connection with Hazardous Material contaminating a property if the contamination resulted from such transferee's actions or use of the property in question; or (iii) the proposed transferee is subject to an enforcement order issued by any governmental authority in connection with the generation, storage, use, treatment or disposal of a Hazardous Material.

6.3. Right of Entry. In addition to the provisions of Section 5.11 above, Landlord, its employees, agents and consultants, shall have the right to enter the Leased Premises at any time, in case of an emergency, and otherwise upon 24 hours prior notice to Tenant during reasonable hours, in order to conduct periodic environmental inspections and tests to determine whether any Hazardous Materials are present. The costs and expenses of such inspections shall be paid by Landlord unless a default or breach of this Lease, violation of Laws or contamination caused or permitted by Tenant is found to exist or Landlord has reason to believe such a default exists. In such event, Tenant shall reimburse Landlord upon demand, as Additional Rent, for the costs and expenses of such inspections. Notwithstanding anything to the contrary in this Lease, Landlord's access to scientifically sensitive areas are subject to the terms and provisions set forth in Section 5.11 above.

6.4. Notice to Landlord. Tenant shall immediately notify Landlord in writing of: (i) any enforcement, clean-up, removal or other governmental or regulatory action instituted or threatened regarding the Leased Premises or the Project pursuant to any Laws; (ii) any claim made or threatened by any person against Tenant or the Leased Premises relating to damage, contribution, cost recovery, compensation, loss or injury resulting from or claimed to result from any Hazardous Material; and (iii) any reports made to or received from any governmental agency arising out of or in connection with any Hazardous Material in or removed from the Leased Premises or the Project, including any complaints, notices, warnings or asserted violations in connection therewith. Tenant shall also supply to Landlord as promptly as possible, and in any event within three (3) business days after Tenant first receives or sends the same, copies of all claims, reports, complaints, notices, warnings, asserted violations or other communications relating in any way to the Leased Premises or Tenant's use thereof.

6.5. Disclosure as to Hazardous Materials. Landlord hereby discloses to Tenant that previous occupants or others possessed and used or may have possessed and used materials and other substances in or about the Leased Premises or portions thereof and which may contain or may have contained Hazardous Materials. In addition: (i) portions of the Project (including, without limitation, the equipment rooms and emergency generator areas, if any) contain Hazardous Materials of the kind ordinarily employed in such areas; and (ii) automobiles and other vehicles operated or parked in the parking and loading dock areas emit substances which may contain Hazardous Materials. Tenant acknowledges that Tenant has received the asbestos notification letter attached to this Lease as **Exhibit E** hereto, disclosing the existence of asbestos in the Building. As part of Tenant's obligations under this Lease, Tenant agrees to comply with the California "Connolly Act" and other applicable laws, including providing copies of Landlord's asbestos notification letter to all of Tenant's "employees" and "owners", as those terms are defined in the Connolly Act and other applicable laws.

Article 7.

Insurance, Indemnity, Condemnation, Damage and Default

7.1. Landlord's Insurance. Landlord shall secure and maintain policies of insurance for the Project covering loss of or damage to the Project, including the Tenant Improvements, if any, but

excluding all subsequent alterations, additions and improvements to the Leased Premises, with loss payable to Landlord and to the holders of any deeds of trust, mortgages or ground leases on the Project. Landlord shall not be obligated to obtain insurance for Tenant's trade fixtures, equipment, furnishings, machinery or other property. Such policies shall provide protection against fire and extended coverage perils and such additional perils as Landlord deems suitable, and with such deductible(s) as Landlord shall deem reasonably appropriate. Landlord shall further secure and maintain commercial general liability insurance with respect to the Project in such amount as Landlord shall determine, such insurance to be in addition to, and not in lieu of, the liability insurance required to be maintained by Tenant. Landlord may elect to self-insure for the coverages required under this Section 7.1. If the annual cost to Landlord for any such insurance exceeds the standard rates because of the nature of Tenant's operations, Tenant shall, upon receipt of appropriate invoices, reimburse Landlord for such increases in cost, which amounts shall be deemed Additional Rent hereunder. Tenant shall not be named as an additional insured on any policy of insurance maintained by Landlord.

7.2. Tenant's Liability Insurance. Tenant (with respect to both the Leased Premises and the Project) shall secure and maintain, at its own expense, at all times during the Term (including any early access period), a policy or policies of commercial general liability insurance with the premiums thereon fully paid in advance, protecting Tenant and naming Landlord, the holders of any deeds of trust, mortgages or ground leases on the Project, and Landlord's representatives (which term, whenever used in this Article 7, shall be deemed to include Landlord's partners, trustees, ancillary trustees, officers, directors, shareholders, beneficiaries, agents, employees and independent contractors) as additional insureds against claims for bodily injury, personal injury, advertising injury and property damage (including attorneys' fees) based upon, involving or arising out of Tenant's operations, assumed liabilities or Tenant's use, occupancy or maintenance of the Leased Premises and the Common Areas of the Project. Such insurance shall provide for a minimum amount of Two Million Dollars (\$2,000,000.00) for property damage or injury, bodily injury, or death of one or more than one person in any one accident or occurrence, with an annual aggregate limit of at least Five Million Dollars (\$5,000,000.00). The coverage required to be carried shall include fire legal liability, blanket contractual liability, personal injury liability (libel, slander, false arrest and wrongful eviction), broad form property damage liability, products liability and completed operations coverage (as well as owned, non-owned and hired automobile liability if an exposure exists) and the policy shall contain an exception to any pollution exclusion which insures damage or injury arising out of heat, smoke or fumes from a hostile fire. Such insurance shall be written on an occurrence basis and contain a separation of insureds provision or cross-liability endorsement acceptable to Landlord. Tenant shall provide Landlord with a certificate evidencing such insurance coverage. The certificate shall indicate that the insurance provided specifically recognizes the liability assumed by Tenant under this Lease and that Tenant's insurance is primary to and not contributory (and Tenant shall provide Landlord with evidence of a primary and non-contributory endorsement) with any other insurance maintained by Landlord, whose insurance shall be considered excess insurance only. Not more frequently than every two (2) years, if, in the opinion of any mortgagee of Landlord or of the insurance broker retained by Landlord, the amount of liability insurance coverage at that time is not adequate, then Tenant shall increase its liability insurance coverage as required by either any mortgagee of Landlord or Landlord's insurance broker. Whenever, in Landlord's reasonable judgment, good business practice or change in conditions indicate a need for additional or different types of insurance, Tenant shall, within fifteen (15) days of receipt of Landlord's request therefor, obtain the insurance at its own expense.

7.3. Tenant's Additional Insurance Requirements.

(a) Tenant shall secure and maintain, at Tenant's expense, at all times during the Term (including any early access period), a commercial property policy, covering risks of direct physical loss (known as Special Form coverage) including a replacement cost provision, on all of Tenant's fixtures, furnishings, equipment, machinery, merchandise and personal property in the Leased Premises and on any alterations, additions or improvements made by or for Tenant upon the Leased Premises, all for the full replacement cost thereof without deduction for depreciation of the covered items and in amounts that meet any co-insurance clauses of the policies of insurance. Such insurance shall insure against those risks customarily covered in an "all risk" policy of insurance covering physical loss or damage. Tenant shall use the proceeds from such insurance for the replacement of fixtures, furnishings, equipment and personal property and for the restoration of any alterations, additions or improvements to the Leased Premises. In addition, Tenant shall secure and maintain, at all times during the Term, loss of income, business interruption and extra expense insurance in such amounts as will reimburse Tenant for direct or indirect loss of earnings and incurred costs for a minimum period of twelve (12) months attributable to all perils commonly insured against by prudent tenants or attributable to prevention of access to the Leased Premises or to the Building as a result of such perils; such insurance shall be maintained with Tenant's property insurance carrier. Further, Tenant shall secure and maintain at all times during the Term workers' compensation insurance in such amounts as are required by law, employer's liability insurance in the amount of One Million Dollars (\$1,000,000.00) per occurrence, and all such other insurance as may be required by applicable law or as may be reasonably required by Landlord. In the event Tenant makes any alterations, additions or improvements to the Leased Premises, prior to commencing any work in the Leased Premises, Tenant shall secure "builder's all risk" insurance which shall be maintained throughout the course of construction, such policy being an all risk builder's risk completed value form, in an amount approved by Landlord, but not less than the total contract price for the construction of such alterations, additions or improvements and covering the construction of such alterations, additions or improvements, and such other insurance as Landlord may reasonably require, it being understood and agreed that all of such alterations, additions or improvements shall be insured by Tenant pursuant to this Section 7.3 immediately upon completion thereof. Tenant shall provide Landlord with certificates of all such insurance. The property insurance certificate shall confirm that the waiver of subrogation required to be obtained pursuant to Section 7.5 is permitted by the insurer. Tenant shall, at least thirty (30) days prior to the expiration of any policy of insurance required to be maintained by Tenant under this Lease, furnish Landlord with an "insurance binder" or other satisfactory evidence of renewal thereof.

(b) All policies required to be carried by Tenant under this Lease shall be issued by and binding upon a reputable insurance company of good financial standing licensed to do business in the State of California with a rating of at least A-IX or such other rating as may be required by a lender having a lien on the Project, as set forth in the most current issue of "Best's Insurance Reports." Tenant shall not do or permit anything to be done that would invalidate the insurance policies referred to in this Article 7. All policies required to be carried by Tenant under this Article 7 shall contain a waiver of subrogation endorsement and shall contain an endorsement or endorsements providing that (i) Landlord and its affiliated entities, the property manager for the Building, the asset manager for the Building, and any lender with a deed of trust encumbering the Project or any part thereof, of whom Landlord has notified Tenant, are included as additional insureds, (ii) the insurer agrees not to cancel or alter the policy without at least thirty (30) days' prior written notice to Landlord and all named and additional insureds, and (iii) all such insurance maintained by Tenant is primary, with any other insurance available to Landlord or any other named or additional insured being excess and non-contributing.

(c) Tenant shall provide evidence of each of the policies of insurance which Tenant is required to obtain and maintain pursuant to this Lease on or before the Delivery Date (or any early access period, if applicable) and at least thirty (30) days prior to the expiration of any policy, which evidence shall be binding upon the insurance carrier, shall be accompanied by a copy of the ISO Additional Insured Endorsement CG 2037 or CG 2026 (or their equivalent), as applicable, and, as to property insurance, shall be in the form of an "ACORD 28 (10/2003)" evidence of insurance or other form reasonably acceptable to Landlord. In the event that Tenant fails to provide evidence of insurance required to be provided by Tenant under this Lease, prior to commencement of the Term, and thereafter during the Term, within ten (10) days following Landlord's written request therefor, and thirty (30) days prior to the expiration date of any such coverage, Landlord shall be authorized (but not required) to procure such coverage in the amounts stated with all costs thereof (plus a fifteen percent (15%) administrative fee) to be chargeable to Tenant and payable upon written invoice therefor, which amounts shall be deemed Additional Rent hereunder.

(d) The minimum limits of insurance required by this Lease, or as carried by Tenant, shall not limit the liability of Tenant nor relieve Tenant of any obligation hereunder.

7.4. Indemnity and Exoneration.

(a) To the extent not prohibited by law, Landlord and Landlord's representatives, partners, members, agents, employees, directors, officers, successors and assigns ("Landlord's Representatives") shall not be liable for any loss, injury or damage to person or property of Tenant, Tenant's agents, employees, contractors, invitees or any other person, whether caused by theft, fire, act of God, acts of the public enemy, riot, strike, insurrection, war, court order, requisition or order of governmental body or authority or which may arise through repair, alteration or maintenance of any part of the Project or failure to make any such repair or from any other cause whatsoever, except (i) as expressly otherwise provided in Sections 7.6 and 7.7, or (ii) to the extent arising from the gross negligence or willful misconduct of Landlord or the Landlord Representatives. Landlord shall not be liable for any loss, injury or damage arising from any act or omission of any other tenant or occupant of the Project, nor shall Landlord be liable under any circumstances for damage or inconvenience to Tenant's business or for any loss of income or profit therefrom.

(b) Tenant shall indemnify, protect, defend and hold the Project, Landlord and Landlord's Representatives, harmless of and from any and all claims, liability, costs, penalties, fines, damages, injury, judgments, forfeiture, losses (including without limitation diminution in the value of the Leased Premises) or expenses (including without limitation attorneys' fees, consultant fees, testing and investigation fees, expert fees and court costs) arising out of or in any way related to or resulting directly or indirectly from (i) the use or occupancy of the Leased Premises, (ii) the activities of Tenant or Tenant's Representatives in or about the Leased Premises or the Project, (iii) any failure to comply with any applicable law, and (iv) any default or breach by Tenant in the performance of any obligation of Tenant under this Lease; provided, however, that the foregoing indemnity shall not be applicable to claims arising by reason of the active gross negligence or willful misconduct of Landlord.

(c) Tenant shall indemnify, protect, defend and hold the Project, Landlord and its representatives, harmless of and from any and all claims, liability, costs, penalties, fines, damages, injury, judgments, forfeiture, losses (including without limitation diminution in the value of the Leased Premises) or expenses (including without limitation attorneys' fees, consultant fees, testing and investigation fees, expert fees and court costs) arising out of or in any way related to or resulting directly or indirectly from work or labor performed, materials or supplies furnished to or at the request of Tenant or in connection with obligations incurred by or performance of any work done for the account of Tenant in the Leased Premises or the Project.

(d) Landlord shall indemnify, protect, defend and hold Tenant, its partners, members, agents, employees, directors, officers, successors and assigns harmless of and from any and all claims, liability, costs, penalties, fines, damages, injury, judgments, forfeiture, losses or expenses (including without limitation attorneys' fees, consultant fees, testing and investigation fees, expert fees and court costs) to the extent arising out of or in any way related to or resulting directly or indirectly from the active gross negligence or willful misconduct of Landlord.

(e) The provisions of this Section 7.4 shall survive the expiration or sooner termination of this Lease. **TENANT AND LANDLORD EACH ACKNOWLEDGE THAT IT HAS READ AND UNDERSTANDS THE MEANING AND RAMIFICATIONS OF THE PROVISIONS SET FORTH IN THIS SECTION 7.4 AND FURTHER ACKNOWLEDGE THAT SUCH PROVISIONS WERE SPECIFICALLY NEGOTIATED.**

7.5. Waiver of Subrogation. Anything in this Lease to the contrary notwithstanding, Landlord and Tenant each waives all rights of recovery, claim, action or cause of action against the other, its agents (including partners, both general and limited), trustees, officers, directors, and employees, for any loss or damage that may occur to the Leased Premises, or any improvements thereto, or the Project or any personal property of such party therein, by reason of any cause required to be insured against under this Lease to the extent of the coverage required, regardless of cause or origin, including negligence of the other party hereto, provided that such party's insurance is not invalidated thereby; and each party covenants that, to the fullest extent permitted by law, no insurer shall hold any right of subrogation against such other party. Tenant shall advise its insurers of the foregoing and such waiver shall be a part of each policy maintained by Tenant which applies to the Leased Premises, any part of the Project or Tenant's use and occupancy of any part thereof.

7.6. Condemnation.

(a) If the Leased Premises are taken under the power of eminent domain or sold under the threat of the exercise of such power (all of which are referred to herein as "condemnation"), this Lease shall terminate as to the part so taken as of the date the condemning authority takes title or possession, whichever first occurs (the "date of taking"). If the Leased Premises or any portion of the Project is taken by condemnation to such an extent as to render the Leased Premises untenable as reasonably determined by Landlord, this Lease shall, at the option of either party to be exercised in writing within thirty (30) days after receipt of written notice of such taking, forthwith cease and terminate as of the date of taking. All proceeds from any condemnation of the Leased Premises shall belong and be paid to Landlord, subject to the rights of any mortgagee of Landlord's interest in the Project or the beneficiary of any deed of trust which constitutes an encumbrance thereon; provided that Tenant shall be entitled to any compensation separately awarded to Tenant for Tenant's relocation

expenses or, loss of Tenant's trade fixtures. If this Lease continues in effect after the date of taking pursuant to the provisions of this Section 7.6(a), Landlord shall proceed with reasonable diligence to repair, at its expense, the remaining parts of the Project and the Leased Premises to substantially their former condition to the extent that the same is feasible (subject to reasonable changes which Landlord shall deem desirable) and so as to constitute a complete and tenantable Project and Leased Premises. Following a taking, Net Rent shall thereafter be equitably adjusted according to the remaining rentable square footage of the Leased Premises and the Building. Except as hereinafter provided, in the event of any taking, Landlord shall have the right to all compensation, damages, income, rent or awards made with respect thereto (collectively an "award"), including any award for the value of the leasehold estate created by this Lease. No award to Landlord shall be apportioned and, subject to Tenant's rights hereinafter specified, Tenant hereby assigns to Landlord any right of Tenant in any award made for any taking. So long as such claim will not reduce any award otherwise payable to Landlord under this Section 7.6, Tenant may seek to recover, at its cost and expense, as a separate claim, any damages or awards payable on a taking of the Leased Premises to compensate for the unamortized cost paid by Tenant for the alterations, additions or improvements, if any, made by Tenant during the initial improvement of the Leased Premises and for any alterations, or for Tenant's personal property taken, or for interference with or interruption of Tenant's business (including goodwill), or for Tenant's removal and relocation expenses.

(b) In the event of a temporary taking of all or a portion of the Leased Premises, there shall be no abatement of Rent and Tenant shall remain fully obligated for performance of all of the covenants and obligations on its part to be performed pursuant to the terms of this Lease.

7.7. Damage or Destruction. In the event of a fire or other casualty in the Leased Premises, Tenant shall immediately give notice thereof to Landlord. The following provisions shall then apply:

(a) If the damage is limited solely to the Leased Premises and the Leased Premises can, in Landlord's reasonable opinion, be made tenantable with all damage repaired (excluding Tenant's personal property, trade fixtures, equipment and any Tenant Improvements or alterations installed by or on behalf of Tenant) within six (6) months from the date of damage, then Landlord shall be obligated to rebuild the same to substantially their former condition to the extent that the same is feasible (subject to reasonable changes which Landlord shall deem desirable and such changes as may be required by applicable law) and shall proceed with reasonable diligence to do so and this Lease shall remain in full force and effect.

(b) If portions of the Project outside the boundaries of the Leased Premises are damaged or destroyed (whether or not the Leased Premises are also damaged or destroyed) and the Leased Premises and the Project can, in Landlord's opinion, both be made tenantable with all damage repaired (excluding Tenant's personal property, trade fixtures, equipment and any Tenant Improvements or alterations installed by or on behalf of Tenant) within six (6) months from the date of damage or destruction, and provided that Landlord determines that it is economically feasible, then Landlord shall be obligated to rebuild the same to substantially their former condition to the extent that the same is feasible (subject to reasonable changes which Landlord shall deem desirable and such changes as may be required by applicable law) and shall proceed with reasonable diligence to do so and this Lease shall remain in full force and effect.

(c) Notwithstanding anything to the contrary contained in Sections 7.7(a) or 7.7(b) above, Landlord shall not have any obligation whatsoever to repair, reconstruct or restore the Leased Premises if (i) the cost to repair and restore the Building is twenty-five percent (25%) or more of the replacement cost of the entire Building prior to such damage or destruction, or (ii) when any damage thereto or to the Building occurs during the last eighteen (18) months of the Term. Under such circumstances, Landlord shall notify Tenant of its decision not to rebuild within ninety (90) days of such damage, whereupon the Lease shall terminate as of the date of such notice.

(d) If neither Section 7.7(a) nor 7.7(b) above applies, Landlord shall so notify Tenant within ninety (90) days after the date of the damage or destruction and either Landlord or Tenant may terminate this Lease within thirty (30) days after the date of such notice, such termination notice to be immediately effective; provided, however, that if Tenant does not terminate this Lease and Landlord elects to reconstruct the Project and the Leased Premises, such election to be made at Landlord's sole option, in which event (i) Landlord shall notify Tenant of such election within said ninety (90) day period, and (ii) Landlord shall proceed with reasonable diligence to rebuild the Project and the Leased Premises to substantially their former condition to the extent that the same is feasible (subject to reasonable changes which Landlord shall deem desirable and such changes as may be required by applicable law) but excluding Tenant's personal property, trade fixtures, equipment and any Tenant Improvements or alterations installed by or on behalf of Tenant.

(e) During any period when Tenant's use of the Leased Premises is significantly impaired by damage or destruction, Base Rent shall abate in proportion to the degree to which Tenant's use of the Leased Premises is impaired and Tenant does not actually use the Leased Premises until such time as the Leased Premises are made tenable as reasonably determined by Landlord; provided that no such rental abatement shall be permitted if the casualty is the result of the negligence or willful misconduct of Tenant or Tenant's Representatives.

(f) The proceeds from any insurance paid by reason of damage to or destruction of the Project or any part thereof insured by Landlord shall belong to and be paid to Landlord, subject to the rights of any mortgagee of Landlord's interest in the Project or the beneficiary of any deed of trust which constitutes an encumbrance thereon. Tenant shall be responsible at its sole cost and expense for the repair, restoration and replacement of (i) its fixtures, furnishings, equipment, machinery, merchandise and personal property in the Leased Premises, and (ii) its alteration, additions and improvements.

(g) Landlord's repair and restoration obligations under this Section 7.7 shall not impair or otherwise affect the rights and obligations of the parties set forth elsewhere in this Lease. Subject to Section 7.7(e), Landlord shall not be liable for any inconvenience or annoyance to Tenant, its employees, agents, contractors or invitees, or injury to Tenant's business resulting in any way from such damage or the repair thereof. Landlord and Tenant agree that the terms of this Lease shall govern the effect of any damage to or destruction of the Leased Premises or the Project with respect to the termination of this Lease and hereby waive the provisions of any present or future statute or law to the extent inconsistent therewith.

(h) Tenant shall promptly replace or repair, at Tenant's cost and expense, Tenant's movable furniture, equipment, trade fixtures and other personal property in the Leased Premises which Tenant shall be responsible for insuring during the Term of this Lease.

(i) Tenant shall pay to Landlord, as Additional Rent, the deductible amounts under the insurance policies obtained by Landlord and Tenant under this Lease if the proceeds are used to repair the Leased Premises. However, if other portions of the Building are also damaged by said casualty and insurance proceeds are payable therefor, then Tenant shall only pay its Proportionate Share of the deductible as reasonably determined by Landlord.

(j) The respective rights and obligations of Landlord and Tenant in the event of any damage to or destruction of the Leased Premises, or any other portion of the Building or the Project, are governed exclusively by this Lease. Accordingly, Tenant hereby waives the provisions of any law to the contrary, including California Civil Code Sections 1932(2), 1933(4), 1941 and 1942 and any similar or successor laws and any other laws providing for the termination of a lease upon destruction of the leased property.

7.8. Default by Tenant.

(a) **Events of Default.** The occurrence of any of the following shall constitute an event of default on the part of Tenant (an "Event of Default"):

(1) **Abandonment.** Vacating the Leased Premises without the intention to reoccupy same, or abandonment of the Leased Premises for a continuous period in excess of ten (10) days other than as a result of casualty, remediation, restoration or alterations;

(2) **Nonpayment of Rent.** Failure to pay any installment of Rent due and payable hereunder on the date when payment is due where such failure shall continue for a period of three (3) days after written notice thereof from Landlord to Tenant; furthermore, if Tenant shall be served with a demand for the payment of past due Rent more than two (2) times during the Term, any payment(s) tendered thereafter to cure any default by Tenant shall be made only by cashier's check, wire-transfer or direct deposit of immediately available funds;

(3) **Other Obligations.** Failure to perform any obligation, agreement or covenant under this Lease other than those matters specified in subsections 7.8(a)(1), 7.8(a)(2) or 7.8(a)(12), such failure continuing for a period of thirty (30) days after written notice of such failure (or such longer period as is reasonably necessary to remedy such default (not to exceed sixty (60) days), provided that Tenant commences the remedy within such thirty (30)-day period and continuously and diligently pursues such remedy at all times until such default is cured);

(4) **General Assignment.** Any general arrangement or assignment by Tenant for the benefit of creditors;

(5) **Bankruptcy.** The filing of any voluntary petition in bankruptcy by Tenant, or the filing of an involuntary petition against Tenant, which involuntary petition remains undischarged for a period of sixty (60) days. In the event that under applicable law the trustee in bankruptcy or Tenant has the right to affirm this Lease and continue to perform the obligations of Tenant hereunder, such trustee or Tenant shall, within such time period as may be permitted by the bankruptcy court having jurisdiction, cure all defaults of Tenant hereunder outstanding as of the date of the affirmance of this Lease and provide to Landlord such adequate assurances as may be necessary to ensure Landlord of the continued performance of Tenant's obligations under this Lease;

(6) **Receivership.** The appointment of a trustee or receiver to take possession of all or substantially all of Tenant's assets or the Leased Premises, where possession is not restored to Tenant within ten (10) business days;

(7) **Attachment.** The attachment, execution or other judicial seizure of all or substantially all of Tenant's assets or the Leased Premises, if such attachment or other seizure remains undismissed or undischarged for a period of ten (10) business days after the levy thereof;

(8) **Insolvency.** The admission by Tenant in writing of its inability to pay its debts as they become due; the filing by Tenant of a petition seeking any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation; the filing by Tenant of an answer admitting or failing timely to contest a material allegation of a petition filed against Tenant in any such proceeding; or, if within sixty (60) days after the commencement of any proceeding against Tenant seeking any reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation, such proceeding shall not have been dismissed;

(9) **Guarantor.** If the performance of Tenant's obligations under this Lease is guaranteed: (i) the death of a guarantor; (ii) the termination of a guarantor's liability with respect to this Lease other than in accordance with the terms of such guaranty; (iii) a guarantor's becoming insolvent or the subject of a bankruptcy filing; (iv) a guarantor's refusal to honor the guaranty; or (v) a guarantor's breach of its guaranty obligation on an anticipatory breach basis, and Tenant's failure, within sixty (60) days following written notice by or on behalf of Landlord to Tenant of any such event, to provide Landlord with written alternative assurance or security, which, when coupled with the then existing resources of Tenant, equals or exceeds the combined financial resources of Tenant and the guarantor(s) that existed at the time of execution of this Lease;

(10) **Partner.** If Tenant is a partnership or consists of more than one (1) person or entity, if any partner of the partnership or any person or entity constituting Tenant is involved in any of the events or acts described in subsections 7.8(a)(4) through (8);

(11) **Misrepresentation.** The discovery by Landlord that any representation, warranty or financial statement given to Landlord by Tenant or any guarantor of Tenant's obligations under this Lease was materially false or misleading; or

(12) **Estoppel/SNDA.** Failure to deliver the documents required to be delivered by Tenant under Sections 5.12 and/or 5.13 within the applicable time period set forth in such sections.

(b) Remedies Upon Default:

(1) **Termination.** If an event of default occurs, Landlord shall have the right, with or without notice or demand, immediately (after expiration of any applicable grace period specified herein) to terminate this Lease, and at any time thereafter recover possession of the Leased Premises or any part thereof and expel and remove therefrom Tenant and any other person occupying the same, by any lawful means, and again repossess and enjoy the Leased Premises without prejudice to any of the remedies that Landlord may have under this Lease, or at law or in equity by reason of Tenant's default or of such termination. In addition to the foregoing, if at any time, Tenant is in

default of any term, condition or provision of this Lease, to the fullest extent permitted by law, any express or implicit waiver by Landlord of Tenant's requirement to pay Base Rent shall be null and void and Tenant shall immediately pay to Landlord all Base Rent so expressly or implicitly waived by Landlord.

(2) **Continuation After Default.** Even though Tenant has breached this Lease and/or abandoned the Leased Premises, this Lease shall continue in effect for so long as Landlord does not terminate Tenant's right to possession under subsection 7.8(b)(1) hereof in writing, and Landlord may enforce all of its rights and remedies under this Lease, including (but without limitation) the right to recover Rent as it becomes due, and Landlord, without terminating this Lease, may exercise all of the rights and remedies of a landlord under Section 1951.4 of the Civil Code of the State of California or any amended or successor code section. Acts of maintenance or preservation, efforts to relet the Leased Premises or the appointment of a receiver upon application of Landlord to protect Landlord's interest under this Lease shall not constitute an election to terminate Tenant's right to possession. If Landlord elects to relet the Leased Premises for the account of Tenant, the rent received by Landlord from such reletting shall be applied as follows: first, to the payment of any indebtedness other than Rent due hereunder from Tenant to Landlord; second, to the payment of any costs of such reletting; third, to the payment of the cost of any alterations or repairs to the Leased Premises; fourth, to the payment of Rent due and unpaid hereunder; and the balance, if any, shall be held by Landlord and applied in payment of future Rent as it becomes due. If that portion of rent received from the reletting which is applied against the Rent due hereunder is less than the amount of the Rent due, Tenant shall pay the deficiency to Landlord promptly upon demand by Landlord. Such deficiency shall be calculated and paid monthly. Tenant shall also pay to Landlord, as soon as determined, any costs and expenses incurred by Landlord in connection with such reletting or in making alterations and repairs to the Leased Premises, which are not covered by the rent received from the reletting.

(c) **Damages Upon Termination.** Should Landlord terminate this Lease pursuant to the provisions of subsection 7.8(b)(1) hereof, Landlord shall have all the rights and remedies of a landlord provided by Section 1951.2 of the Civil Code of the State of California. Upon such termination, in addition to any other rights and remedies to which Landlord may be entitled under applicable law, Landlord shall be entitled to recover from Tenant: (i) the worth at the time of award of the unpaid Rent and other amounts which had been earned at the time of termination; (ii) the worth at the time of award of the amount by which the unpaid Rent which would have been earned after termination until the time of award exceeds the amount of such Rent loss that Tenant proves could have been reasonably avoided; (iii) the worth at the time of award of the amount by which the unpaid Rent for the balance of the Term after the time of award exceeds the amount of such Rent loss that Tenant proves could be reasonably avoided; and (iv) any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which, in the ordinary course of things, would be likely to result therefrom. The "worth at the time of award" of the amounts referred to in clauses (i) and (ii) shall be computed with interest at the lesser of eighteen percent (18%) per annum or the maximum rate then allowed by law. The "worth at the time of award" of the amount referred to in clause (iii) shall be computed by discounting such amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of the award plus one percent (1%).

(d) **Computation of Rent for Purposes of Default.** For purposes of computing unpaid Rent which would have accrued and become payable under this Lease pursuant to the provisions of Section 7.8(c), unpaid Rent shall consist of the sum of:

(1) the total Base Rent for the balance of the Term, plus

(2) a computation of Tenant's Proportionate Share of Basic Operating Costs for the balance of the Term, the assumed amount for the Computation Year of the default and each future Computation Year in the Term to be equal to Tenant's Proportionate Share of Basic Operating Costs for the Computation Year immediately prior to the year in which default occurs, compounded at a per annum rate equal to the mean average rate of inflation for the preceding five (5) calendar years as determined by the United States Department of Labor, Bureau of Labor Statistics Consumer Price Index (All Urban Consumers, all items (1982-84=100)) for the Metropolitan Area or Region in which the Project is located. If such Index is discontinued or revised, the average rate of inflation shall be determined by reference to the index designated as the successor or substitute index by the government of the United States.

(e) **Late Charge.** If any payment required to be made by Tenant under this Lease is not received by Landlord on or before the date the same is due, Tenant shall pay to Landlord an amount equal to ten percent (10%) of the delinquent amount. The parties agree that Landlord would incur costs not contemplated by this Lease by virtue of such delinquencies, including without limitation administrative, collection, processing and accounting expenses, the amount of which would be extremely difficult to compute, and the amount stated herein represents a reasonable estimate thereof. Acceptance of such late charge by Landlord shall in no event constitute a waiver of Tenant's breach or default with respect to such delinquency, or prevent Landlord from exercising any of Landlord's other rights and remedies. Notwithstanding the foregoing, Landlord will not assess a late charge for the first late payment during each Lease Year; provided that such payment is made within five (5) business days after Tenant receives written notice of such late payment from Landlord. After Landlord has given written notice of the first late payment in any Lease Year, no other notices will be required during the remainder of such Lease Year for a late charge to be assessed to Tenant.

(f) **Interest on Past-Due Obligations.** Except as expressly otherwise provided in this Lease, any Rent due Landlord hereunder, other than late charges, which is not received by Landlord on the date on which it was due, shall bear interest from the day after it was due at the lesser of fifteen percent (15%) per annum or the maximum rate then allowed by law, in addition to the late charge provided for in Section 7.8(e).

(g) **Landlord's Right to Perform.** Notwithstanding anything to the contrary set forth elsewhere in this Lease, in the event Tenant fails to perform any affirmative duty or obligation of Tenant under this Lease, then Landlord may (but shall not be obligated to) perform such duty or obligation on Tenant's behalf without waiving any of Landlord's rights in connection therewith or releasing Tenant from any of its obligations or such default, including, without limitation, the obtaining of insurance policies or governmental licenses, permits or approvals. Tenant shall reimburse Landlord upon demand for the costs and expenses of any such performance (including penalties, interest and attorneys' fees incurred in connection therewith). Such costs and expenses incurred by Landlord shall be deemed Additional Rent hereunder.

(h) **Remedies Cumulative.** All rights, privileges and elections or remedies of Landlord are cumulative and not alternative with all other rights and remedies at law or in equity to the fullest extent permitted by law.

(i) **Waiver.** Tenant waives any right of redemption or relief from forfeiture under California Code of Civil Procedure Sections 1174 and 1179 and California Civil Code Section 3275, or under any other present or future law in the event Tenant is evicted and Landlord takes possession of the Leased Premises by reason of a default.

Article 8. Option to Renew

8.1. Option to Renew.

(a) Landlord hereby grants to Tenant one (1) option (the "Option") to extend the term of this Lease for an additional period of five (5) years (the "Option Term"), all on the following terms and conditions:

(1) The Option must be exercised, if at all, by written notice irrevocably exercising the Option ("Option Notice") delivered by Tenant to Landlord not later than nine (9) months and not earlier than twelve (12) months prior to the Term Expiration Date. Further, at Landlord's option, the Option shall not be deemed to be properly exercised if, as of the date of the Option Notice or at the Term Expiration Date, (i) Tenant is in default under this Lease, (ii) Tenant has assigned this Lease or sublet more than fifty percent (50%) of the Leased Premises (other than to an affiliate or subsidiary of Tenant), (iii) Tenant, or Tenant's affiliate or subsidiary, is in possession of less than fifty percent (50%) of the square footage of the Leased Premises, or (iv) Tenant has been in default beyond all applicable notice and cure periods at any time during the Term. Provided Tenant has properly and timely exercised the Option, the term of this Lease shall be extended for the period of the Option Term, and all terms, covenants and conditions of this Lease shall remain unmodified and in full force and effect, except that (i) the Tenant Improvements set forth in **Exhibit B** shall not apply to the Option Term (Tenant shall accept the Leased Premises in its AS IS condition existing prior to Option Term), and (ii) the Base Rent shall be modified as set forth in subsection 8.1(a)(2) below.

(2) The Base Rent payable for the initial year of the Option Term shall be the then-current rental rate per rentable square foot (as further defined below, "FMRR") being agreed to (with annual market increases) in renewal leases by the Landlord and other landlords of buildings in the Pleasanton, California area which are comparable in quality, location and prestige to the Building ("Comparable Buildings") and tenants leasing space in the Building or Comparable Buildings. As used herein, "FMRR" shall mean the rental rate per rentable square foot for which Landlord and/or other landlords are entering into new and/or renewal leases with new and/or renewal tenants leasing from Landlord and other landlords office space in the Building and/or Comparable Buildings ("Comparative Transactions"), taking into consideration fair market annual increases, whether or not parking is free or paid, and the value of existing tenant improvements in the Leased Premises. To the extent such other Comparable Buildings have historically received lower or higher rents from the rents in the Building, then for the purpose of arriving at the FMRR, such rates when used to establish the FMRR in the Building shall be increased or decreased as appropriate to reflect

such historical differences. Landlord shall provide its determination of the FMRR to Tenant within twenty (20) days after Landlord receives the Option Notice. Tenant shall have ten (10) days ("Tenant's Review Period") after receipt of Landlord's notice of the FMRR within which to accept such FMRR or to reasonably object thereto in writing. In the event Tenant objects to the FMRR submitted by Landlord, Landlord and Tenant shall attempt to agree upon such FMRR. If Landlord and Tenant fail to reach agreement on such FMRR within ten (10) days following Tenant's Review Period (the "Outside Agreement Date"), then each party shall place in a separate sealed envelope its final proposal as to FMRR and such determination shall be submitted to arbitration in accordance with subparagraph 8.1(b) below.

(b) Landlord and Tenant shall meet with each other within three (3) business days of the Outside Agreement Date and exchange the sealed envelopes and then open such envelopes in each other's presence. If Landlord and Tenant do not mutually agree upon the FMRR within one (1) business day of the exchange and opening of envelopes, then, within ten (10) business days of the exchange and opening of envelopes, Landlord and Tenant shall agree upon and jointly appoint one arbitrator who shall be by profession be a real estate broker who shall have been active over the ten (10) year period ending on the date of such appointment in the leasing of comparable commercial properties in the vicinity of the Building. Neither Landlord nor Tenant shall consult with such broker as to his or her opinion as to FMRR prior to the appointment. The determination of the arbitrator shall be limited solely to the issue of whether Landlord's or Tenant's submitted FMRR for the Leased Premises is the closer to the actual rental rate per rentable square foot for new leases for Comparative Transactions. Such arbitrator may hold such hearings and require such briefs as the arbitrator, in his or her sole discretion, determines is necessary. In addition, Landlord or Tenant may submit to the arbitrator with a copy to the other party within two (2) business days after the appointment of the arbitrator any data and additional information that such party deems relevant to the determination by the arbitrator ("Data") and the other party may submit a reply in writing within two (2) business days after receipt of such Data.

(1) The arbitrator shall, within thirty (30) days of his or her appointment, reach a decision as to whether the parties shall use Landlord's or Tenant's submitted FMRR, and shall notify Landlord and Tenant of such determination.

(2) The decision of the arbitrator shall be binding upon Landlord and Tenant.

(3) If Landlord and Tenant fail to agree upon and appoint such arbitrator, then the appointment of the arbitrator shall be made by the American Arbitration Association.

(4) The cost of arbitration shall be paid by the losing party.

(5) The arbitration proceeding and all evidence given or discovered pursuant thereto shall be maintained in confidence by all parties.

Article 9.
Miscellaneous Matters

9.1. Parking.

(a) Provided Tenant is not in default of any term or provision of this Lease, Landlord agrees to provide Tenant for use by the employees, agents, customers and invitees of Tenant the number of parking spaces designated on the Basic Lease Information sheet on an unreserved and unassigned basis on those portions of the Project designated by Landlord for parking; provided that, as part of the number of parking spaces designated on the Basic Lease Information sheet, Tenant shall have five (5) reserved parking spaces near the main entrance to the Leased Premises (the location shall be reasonably approved by Landlord in writing) with stenciling on the curb marked "Gritstone Visitor Parking" (such stenciling shall be at Tenant's sole cost). With respect to the foregoing marked parking, Landlord shall have no obligation to monitor or enforce the validity of the vehicles parking/parked in such marked spaces. Tenant shall not use more parking spaces than said number of parking spaces. The parking spaces will not be separately identified and Landlord shall have no obligation to monitor the use of the parking area. If a parking density problem occurs during the Term, Landlord may address the problem, in its reasonable discretion, which solution may include initiating a parking permit system or a reserved parking system and any costs associated therewith (including, without limitation, costs of patrolling the parking lot for compliance with the parking system) shall constitute a Basic Operating Costs. All parking shall be subject to any and all rules and regulations adopted by Landlord in its discretion from time to time. Only automobiles no larger than full size passenger automobiles or pick-up trucks or standard business use vehicles (which do not require parking spaces larger than full size passenger automobiles) may be parked in the Project parking area. Tenant shall not permit or allow any vehicles that belong to or are controlled by Tenant or Tenant's employees, agents, customers or invitees to be loaded, unloaded or parked in areas other than those designated by Landlord for such activities. A failure by Tenant or any of its employees, agents, customers or invitees to comply with the foregoing provisions shall afford Landlord the right, but not the obligation, without notice, in addition to any other rights and remedies available under this Lease, to remove and to tow away the vehicles involved and to charge the cost to Tenant, which cost shall be immediately due and payable upon demand by Landlord. If Tenant relinquishes in writing (or by nonpayment, if a parking fee is charged) any of such parking rights during the Term, Tenant shall no longer have a right to the parking relinquished and may obtain future parking solely on a space-available basis.

(b) Landlord reserves the right to charge a per-car parking fee during the Term if (i) such parking fees are mandated or otherwise imposed by applicable law or (ii) the charging of such parking fees have become standard practice for similarly situated buildings in the immediate geographical area. Rates to be charged by Landlord or its operator for such parking shall be the then-prevailing market rate for parking in such area as established by Landlord or its operator from time to time. If a parking fee is charged, Tenant's right to use of the parking lot shall be subject to timely payment of the established parking fees.

9.2. Brokers. Landlord has been represented in this transaction by Landlord's Broker. Tenant has been represented in this transaction by Tenant's Broker. Upon full execution of this Lease by both parties, Landlord shall pay to Landlord's Broker and Landlord's Broker shall pay Tenant's Broker a fee for brokerage services rendered by it in this transaction provided for in separate written

agreements between Landlord and Landlord's Broker and Landlord's Broker and Tenant's Broker. Tenant represents and warrants to Landlord that the brokers named in the Basic Lease Information sheet are the only agents, brokers, finders or other similar parties with whom Tenant has had any dealings in connection with the negotiation of this Lease and the consummation of the transaction contemplated hereby. Tenant hereby agrees to indemnify, defend and hold Landlord free and harmless from and against liability for compensation or charges which may be claimed by any agent, broker, finder or other similar party by reason of any dealings with or actions of Tenant in connection with the negotiation of this Lease and the consummation of this transaction, including any costs, expenses and attorneys' fees incurred with respect thereto.

9.3. No Waiver. No waiver by either party of the default or breach of any term, covenant or condition of this Lease by the other shall be deemed a waiver of any other term, covenant or condition hereof, or of any subsequent default or breach by the other of the same or of any other term, covenant or condition hereof. Landlord's consent to, or approval of, any act shall not be deemed to render unnecessary the obtaining of Landlord's consent to, or approval of, any subsequent or similar act by Tenant, or be construed as the basis of an estoppel to enforce the provision or provisions of this Lease requiring such consent. Regardless of Landlord's knowledge of a default or breach at the time of accepting Rent, the acceptance of Rent by Landlord shall not be a waiver of any preceding default or breach by Tenant of any provision hereof, other than the failure of Tenant to pay the particular Rent so accepted. Any payment given Landlord by Tenant may be accepted by Landlord on account of monies or damages due Landlord, notwithstanding any qualifying statements or conditions made by Tenant in connection therewith, which statements and/or conditions shall be of no force or effect whatsoever unless specifically agreed to in writing by Landlord at or before the time of deposit of such payment.

9.4. Recording. Neither this Lease nor a memorandum thereof shall be recorded without the prior written consent of Landlord, which consent may be withheld in Landlord's sole discretion.

9.5. Holding Over. If Tenant fails to surrender possession of the Leased Premises in the condition required under this Lease or holds over after expiration or termination of this Lease without the written consent of Landlord, Tenant shall pay for each month of hold-over tenancy one hundred fifty percent (150%) times the Net Rent which Tenant was obligated to pay for the month immediately preceding the end of the Term for each month or any part thereof of any such hold-over period, together with such other amounts as may become due hereunder. No holding over by Tenant after the Term shall operate to extend the Term. In the event of any unauthorized holding over, Tenant shall indemnify, defend and hold Landlord harmless from and against all claims, demands, liabilities, losses, costs, expenses (including attorneys' fees), injury and damages including any lost profits incurred by Landlord as a result of Tenant's delay in vacating the Leased Premises.

9.6. Transfers by Landlord. The term "Landlord" as used in this Lease shall mean the owner(s) at the time in question of the fee title to the Leased Premises or, if this is a sublease, of the Tenant's interest in the master lease. If Landlord transfers, in whole or in part, its rights and obligations under this Lease or in the Project, upon its transferee's assumption of Landlord's obligations hereunder and delivery to such transferee of any unused Security Deposit then held by Landlord, no further liability or obligations shall thereafter accrue against the transferring or assigning person as Landlord hereunder. Subject to the foregoing, the obligations and/or covenants in this Lease to be performed by the Landlord shall be binding only upon the Landlord as defined in this Section 9.6.

9.7. Attorneys' Fees. In the event either party places the enforcement of this Lease, or any part of it, or the collection of any Rent due, or to become due, hereunder, or recovery of the possession of the Leased Premises, in the hands of an attorney, or files suit upon the same, the prevailing party shall recover its reasonable attorneys' fees, costs and expenses as a cost of suit incurred and not as damages, including those which may be incurred on appeal. Such fees may be awarded in the same suit or recovered in a separate suit, whether or not suit is filed or any suit that may be filed is pursued to decision or judgment. The term "prevailing party" shall include, without limitation, a party who substantially obtains or defeats the relief sought, as the case may be, whether by compromise, settlement, judgment, or the abandonment by the other party of its claim or defense. The attorneys' fee award shall not be computed in accordance with any court fee schedule, but shall be such as to fully reimburse all attorneys' fees reasonably incurred. In addition to the foregoing, in the event Tenant requires Landlord's consent or signature with respect to an agreement or other matter not provided for in this Lease (e.g., an agreement requested by Tenant's lender), Tenant shall reimburse Landlord for its reasonable attorneys' fees or other consultant fees incurred in connection with the review and/or negotiation of such agreement or matter.

9.8. Termination; Merger. No act or conduct of Landlord, including, without limitation, the acceptance of keys to the Leased Premises, shall constitute an acceptance of the surrender of the Leased Premises by Tenant before the scheduled Term Expiration Date. Only a written notice from Landlord to Tenant shall constitute acceptance of the surrender of the Leased Premises and accomplish a termination of this Lease. Unless specifically stated otherwise in writing by Landlord, the voluntary or other surrender of this Lease by Tenant, the mutual termination or cancellation hereof, or a termination hereof by Landlord for default by Tenant, shall automatically terminate any sublease or lesser estate in the Leased Premises; provided, however, Landlord shall, in the event of any such surrender, termination or cancellation, have the option to continue any one or all of any existing subtenancies. Landlord's failure within thirty (30) days following any such event to make any written election to the contrary by written notice to the holder of any such lesser interest, shall constitute Landlord's election to have such event constitute the termination of such interest.

9.9. Amendments; Interpretation. This Lease may only be amended by a writing signed by the parties hereto, or by an electronic record that has been electronically signed by the parties hereto and has been rendered tamper-evident as part of the signing process. The exchange of email or other electronic communications discussing an amendment to this Lease, even if such communications are signed, does not constitute a signed electronic record agreeing to such an amendment. The captions of this Lease are for convenience only and shall not be used to define or limit any of its provisions.

9.10. Severability. If any term or provision of this Lease, or the application thereof to any person or circumstances, shall to any extent be invalid or unenforceable, the remainder of this Lease, or the application of such provision to persons or circumstances other than those as to which it is invalid or unenforceable, shall not be affected thereby, and each provision of this Lease shall be valid and shall be enforceable to the fullest extent permitted by law.

9.11. Notices. All notices required under this Lease and other information concerning this Lease (“Communications”) shall be personally delivered or sent by first class mail, postage prepaid, or by overnight courier. In addition, Landlord may, in its sole discretion, send such Communications to Tenant electronically, or permit Tenant to send such Communications to Landlord electronically, in the manner described in this Section. Such Communications sent by personal delivery, mail or overnight courier will be sent to the addresses on the signature page of this Lease, or to such other addresses as Landlord and Tenant may specify from time to time in writing. Communications shall be effective (i) if mailed, upon the earlier of receipt or five (5) days after deposit in the U.S. mail, first class, postage prepaid, or (ii) if hand-delivered, by courier or otherwise (including telegram, lettergram or mailgram), when delivered.

Such Communications may be sent electronically by Landlord to Tenant (i) by transmitting the Communication to the electronic address provided by the Tenant or to such other electronic address as the Tenant may specify from time to time in writing, or (ii) by posting the Communication on a website and sending Tenant a notice to the Tenant’s postal address or electronic address telling Tenant that the Communication has been posted, its location, and providing instructions on how to view it. Communications sent electronically to Tenant will be effective when the Communication, or a notice advising of its posting to a website, is sent to Tenant’s electronic address. Such Communications may be sent electronically to Landlord by Tenant by transmitting the Communication to an electronic address specified by the Landlord for the express purpose of receiving such Communications. Communications sent electronically to Landlord will be effective when the Communication is received at the specified electronic address.

Tenant acknowledges and accepts the foregoing notice provisions: /s/ A.A. (Tenant’s initials)

9.12. Force Majeure. Any prevention, delay or stoppage of work to be performed by Landlord or Tenant which is due to strikes, labor disputes, inability to obtain labor, materials, equipment or reasonable substitutes therefor, acts of God, governmental restrictions or regulations or controls, judicial orders, enemy or hostile government actions, civil commotion, or other causes beyond the reasonable control of the party obligated to perform hereunder, shall excuse performance of the work by that party for a period equal to the duration of that prevention, delay or stoppage. Nothing in this Section 9.12 shall excuse or delay Tenant’s obligation to pay Rent or other charges due under this Lease.

9.13. Guarantor. If there are to be any guarantors of this Lease, the guarantee shall be on a form provided by Landlord, and each such guarantor shall have the same obligations as Tenant under this Lease, including, but not limited to, the obligation to provide the estoppel certificate and information called for by Section 5.13. It shall constitute a default of Tenant under this Lease if any such guarantor fails or refuses, upon reasonable request by Landlord, to give: (a) evidence of the due execution of the guarantee called for by this Lease, including the authority of the guarantor (and of the party signing on guarantor’s behalf) to obligate such guarantor on said guarantee, and including, in the case of a corporate guarantor, a certified copy of a resolution of the board of directors of guarantor authorizing the making of such guarantee, together with a certificate of incumbency showing the signatures of the persons authorized to sign on its behalf; (b) current financial statements of guarantor as may, from time to time, be requested by Landlord; (c) an estoppel certificate; or (d) written confirmation that the guarantee is still in effect.

9.14. Successors and Assigns. This Lease shall be binding upon and inure to the benefit of Landlord, its successors and assigns (subject to the provisions hereof, including, without limitation, Section 5.15), and shall be binding upon and inure to the benefit of Tenant, its successors, and to the extent assignment or subletting, may be approved by Landlord hereunder, Tenant's assigns or subtenants.

9.15. Further Assurances. Landlord and Tenant each agree to promptly sign all documents reasonably requested to give effect to the provisions of this Lease.

9.16. Incorporation of Prior Agreements. This Lease, including the exhibits and addenda attached to it, contains all agreements of Landlord and Tenant with respect to any matter referred to herein. No prior agreement or understanding pertaining to such matters shall be effective.

9.17. Governing Law. This Lease is governed by federal law, including without limitation the Electronic Signatures in Global and National Commerce Act (15 U.S.C. §§ 7001 et seq.) and, to the extent that state law applies, the laws of the State of California without regard to its conflicts of law rules.

9.18. Time of the Essence. Time is of the essence of each and every covenant of this Lease. Each and every covenant, agreement or other provision of this Lease on Tenant's part to be performed shall be deemed and construed as a separate and independent covenant of Tenant, not dependent on any other provision of this Lease or on any other covenant or agreement set forth herein.

9.19. No Joint Venture. This Lease shall not be deemed or construed to create or establish any relationship of partnership or joint venture or similar relationship or arrangement between Landlord and Tenant hereunder.

9.20. Authority. If Tenant is a corporation, limited liability company, trust or general or limited partnership, each individual executing this Lease on behalf of Tenant represents and warrants that he or she is duly authorized to execute and deliver this Lease on Tenant's behalf and that this Lease is binding upon Tenant in accordance with its terms. If Tenant is a corporation, limited liability company, trust or partnership, Tenant shall, upon request by Landlord, deliver to Landlord evidence satisfactory to Landlord of such authority.

9.21. Landlord Renovations. It is specifically understood and agreed that Landlord has no obligation and has made no promises to alter, remodel, improve, renovate, repair or decorate the Leased Premises, Building, Project, or any part thereof and that no representations or warranties respecting the condition of the Leased Premises, the Building or the Project have been made by Landlord to Tenant, except as specifically set forth in this Lease. However, Tenant acknowledges that Landlord may from time to time, at Landlord's sole option, renovate, improve, alter, or modify (collectively, the "Renovations") the Building, Leased Premises, and/or Project, common areas, systems and equipment, roof, and structural portions of the same, which Renovations may include, without limitation, (i) modifying the common areas and tenant spaces to comply with applicable laws, including regulations relating to the physically disabled, seismic conditions, and building safety and security, and (ii) installing new carpeting, lighting, and wall coverings in the Building common areas, and in connection with such Renovations, Landlord may, among other things, erect scaffolding or other necessary structures in the Building, limit or eliminate access to portions of the Project,

including portions of the common areas, or perform work in the Building, which work may create noise, dust or leave debris in the Building. Tenant hereby agrees that such Renovations and Landlord's actions in connection with such Renovations shall in no way constitute a constructive eviction of Tenant nor entitle Tenant to any abatement of Rent. Landlord shall have no responsibility or for any reason be liable to Tenant for any direct or indirect injury to or interference with Tenant's business arising from the Renovations, nor shall Tenant be entitled to any compensation or damages from Landlord for loss of the use of the whole or any part of the Leased Premises or of Tenant's personal property or improvements resulting from the Renovations or Landlord's actions in connection with such Renovations, or for any inconvenience or annoyance occasioned by such Renovations or Landlord's actions in connection with such Renovations.

9.22. [intentionally deleted].

9.23. Offer. Preparation of this Lease by Landlord or Landlord's agent and submission of same to Tenant shall not be deemed an offer to lease to Tenant. This Lease is not intended to be binding and shall not be effective until fully executed by both Landlord and Tenant.

9.24. Security. Landlord shall not be required to provide, operate or maintain alarm or surveillance systems or services for the Leased Premises or the Common Areas. Tenant shall provide such security services and shall install within the Leased Premises such security equipment, systems and procedures as may reasonably be required for the protection of its employees and invitees, provided that Tenant shall coordinate such services and equipment with Landlord and the Building rules and regulations. The determination of the extent to which such security equipment, systems and procedures are reasonably required shall be made in the sole judgment, and shall be the sole responsibility, of Tenant. Tenant acknowledges that it has neither received nor relied upon any representation or warranty made by or on behalf of Landlord with respect to the safety or security of the Leased Premises or the Project or any part thereof, and further acknowledges that Tenant has made its own independent determinations with respect to all such matters.

9.25. No Easement For Light, Air and View. This Lease conveys to Tenant no rights for any light, air or view. No diminution of light, air or view, or any impairment of the visibility of the Leased Premises from inside or outside the Building, by any structure or other object that may hereafter be erected (whether or not by Landlord) shall entitle Tenant to any reduction of Rent under this Lease, constitute an actual or constructive eviction of Tenant, result in any liability of Landlord to Tenant, or in any other way affect this Lease or Tenant's obligations hereunder.

9.26. OFAC Compliance.

(a) Tenant represents and warrants that (i) Tenant and each person or entity owning an interest in Tenant is (A) not currently identified on the Specially Designated Nationals and Blocked Persons List maintained by the Office of Foreign Assets Control, Department of the Treasury ("OFAC") and/or on any other similar list maintained by OFAC pursuant to any authorizing statute, executive order or regulation (collectively, the "List"), and (B) not a person or entity with whom a citizen of the United States is prohibited to engage in transactions by any trade embargo, economic sanction, or other prohibition of United States law, regulation, or Executive Order of the President of the United States, (ii) none of the funds or other assets of Tenant constitute property of, or are beneficially owned, directly or indirectly, by any Embargoed Person (as hereinafter defined), (iii) no

Embargoed Person has any interest of any nature whatsoever in Tenant (whether directly or indirectly), (iv) none of the funds of Tenant have been derived from any unlawful activity with the result that the investment in Tenant is prohibited by law or that the Lease is in violation of law, and (v) Tenant has implemented procedures, and will consistently apply those procedures, to ensure the foregoing representations and warranties remain true and correct at all times. The term "Embargoed Person" means any person, entity or government subject to trade restrictions under U.S. law, including but not limited to, the International Emergency Economic Powers Act, 50 U.S.C. §1701 et seq., The Trading with the Enemy Act, 50 U.S.C. App. 1 et seq., and any Executive Orders or regulations promulgated thereunder with the result that the investment in Tenant is prohibited by law or Tenant is in violation of law.

(b) Tenant covenants and agrees (i) to comply with all requirements of law relating to money laundering, anti-terrorism, trade embargos and economic sanctions, now or hereafter in effect, (ii) to immediately notify Landlord in writing if any of the representations, warranties or covenants set forth in this paragraph or the preceding paragraph are no longer true or have been breached or if Tenant has a reasonable basis to believe that they may no longer be true or have been breached, (iii) not to use funds from any "Prohibited Person" (as such term is defined in the September 24, 2001 Executive Order Blocking Property and Prohibiting Transactions With Persons Who Commit, Threaten to Commit, or Support Terrorism) to make any payment due to Landlord under the Lease and (iv) at the request of Landlord, to provide such information as may be requested by Landlord to determine Tenant's compliance with the terms hereof.

(c) Tenant hereby acknowledges and agrees that Tenant's inclusion on the List at any time during the Term shall be a material default of the Lease. Notwithstanding anything herein to the contrary, Tenant shall not permit the Leased Premises or any portion thereof to be used or occupied by any person or entity on the List or by any Embargoed Person (on a permanent, temporary or transient basis), and any such use or occupancy of the Leased Premises by any such person or entity shall be a material default of the Lease.

(d) Simultaneously with the execution of the Lease, Tenant will provide to Landlord the names of the persons holding an ownership interest in Tenant, for purposes of compliance with Presidential Executive Order 13224 (issued September 24, 2001).

9.27. Mortgagee Protection. Upon any default on the part of Landlord, Tenant will give written notice by registered or certified mail to any beneficiary of a deed of trust or mortgagee of a mortgage covering the Leased Premises who has provided Tenant with notice of their interest together with an address for receiving notice, and shall offer such beneficiary or mortgagee a reasonable opportunity to cure the default, including time to obtain possession of the Leased Premises by power of sale or a judicial foreclosure, if such should prove necessary to effect a cure. If such default cannot be cured within such time period, then such additional time as may be necessary will be given to such beneficiary or mortgagee to effect such cure so long as such beneficiary or mortgagee has commenced the cure within the original time period and thereafter diligently pursues such cure to completion, in which event this Lease shall not be terminated while such cure is being diligently pursued. Tenant agrees that each lender to whom this Lease has been assigned by Landlord is an express third party beneficiary hereof. Tenant shall not make any prepayment of Rent more than one (1) month in advance without the prior written consent of each such lender. Tenant waives the collection of any deposit from each such lender or purchaser at a foreclosure sale unless said lender or purchaser shall

have actually received and not refunded the deposit. Tenant agrees to make all payments under this Lease to the lender with the most senior encumbrance upon receiving a direction, in writing, to pay said amounts to such lender. Tenant shall comply with such written direction to pay without determining whether an event of default exists under such lender's loan to Landlord. If, in connection with obtaining financing for the Leased Premises or any other portion of the Project, Landlord's lender shall request reasonable modification(s) to this Lease as a condition to such financing, Tenant shall not unreasonably withhold, delay or defer its consent thereto, provided such modifications do not materially and adversely affect Tenant's rights hereunder, including Tenant's use, occupancy or quiet enjoyment of the Leased Premises.

9.28. Confidentiality. Landlord and Tenant each agree that the terms of this Lease are confidential and constitute proprietary information of the parties hereto. Disclosure of the terms hereof could adversely affect the ability of Landlord to negotiate with other tenants. Each of the parties hereto agrees that such party, and its respective partners, officers, directors, employees, agents, real estate brokers and sales persons and attorneys, shall not disclose the terms and conditions of this Lease to any other person without the prior written consent of the other party hereto except pursuant to an order of a court of competent jurisdiction. Provided, however, that Landlord may disclose the terms hereof to any lender now or hereafter having a lien on Landlord's interest in the Project or any portion thereof, and either party may disclose the terms hereof to its respective independent accountants who review its respective financial statements or prepare its respective tax returns, to any prospective transferee of all or any portions of their respective interests hereunder, to any lender or prospective lender to such party, to any governmental entity, agency or person to whom disclosure is required by applicable law, regulation or duty of diligent inquiry and in connection with any action brought to enforce the terms of this Lease, on account of the breach or alleged breach hereof or to seek a judicial determination of the rights or obligations of the parties hereunder. Tenant acknowledges that any breach by Tenant of the agreements set forth in this Section shall cause Landlord irreparable harm. The terms and provisions of this Section shall survive the termination of the Lease (whether by lapse of time or otherwise).

9.29. Waiver of Jury Trial. To the extent permitted by applicable law, Landlord and Tenant each hereby waive trial by jury in any action, proceeding or counterclaim brought by either party against the other on any matter whatsoever arising out of or in any way connected with this Lease, the relationship of Landlord and Tenant created hereby, Tenant's use or occupancy of the Leased Premises or any claim or injury or damage.

9.30. Counterparts; Electronic Signatures. This Lease may be executed in counterparts, including both counterparts that are executed on paper and counterparts that are in the form of electronic records and are executed electronically. An electronic signature means any electronic sound, symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record, including facsimile or e-mail electronic signatures. All executed counterparts shall constitute one agreement, and each counterpart shall be deemed an original. The parties hereby acknowledge and agree that electronic records and electronic signatures, as well as facsimile signatures, may be used in connection with the execution of this Lease and electronic signatures, facsimile signatures or signatures transmitted by electronic mail in so-called pdf format shall be legal and binding and shall have the same full force and effect as if a paper original of this Lease had been delivered had been signed using a handwritten signature. Landlord and Tenant (i) agree that an electronic signature, whether digital or encrypted, of a party to this Lease

is intended to authenticate this writing and to have the same force and effect as a manual signature, (ii) intend to be bound by the signatures (whether original, faxed or electronic) on any document sent or delivered by facsimile or, electronic mail, or other electronic means, (iii) are aware that the other party will rely on such signatures, and (iv) hereby waive any defenses to the enforcement of the terms of this Lease based on the foregoing forms of signature. If this Lease has been executed by electronic signature, all parties executing this document are expressly consenting under the Electronic Signatures in Global and National Commerce Act ("E-SIGN"), and Uniform Electronic Transactions Act ("UETA"), that a signature by fax, email or other electronic means shall constitute an Electronic Signature to an Electronic Record under both E-SIGN and UETA with respect to this specific transaction.

9.31. Accessibility Inspection Disclosure. Landlord and Tenant acknowledge and agree that the Leased Premises have not been inspected by a Certified Access Specialist ("CASp") pursuant to Section 1938 of the Civil Code ("Code"). The parties further agree, pursuant to subdivision (e) of Section 55.53 of the Code the following:

(a) a CASp can inspect the Leased Premises and determine whether the Leased Premises comply with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection of the Leased Premises, Landlord may not prohibit Tenant from obtaining a CASp inspection of the Leased Premises for the occupancy or potential occupancy of Tenant, if requested by the Tenant. The parties shall mutually agree on the arrangements for the time and manner of the CASp inspection, the payment of the fee for the CASp inspection, and the cost of making any repairs necessary to correct violations of the construction-related accessibility standards within the Leased Premises.

(b) pursuant to the paragraph above, the parties expressly agree that, if Tenant elects to obtain a CASp inspection of the Leased Premises, Tenant shall be solely responsible for scheduling the inspection and that such inspection shall not unreasonably interfere with the operations of the Leased Premises [and/or the building] or disturb any other tenant or occupant. Tenant shall be solely responsible for any and all costs to perform the CASp inspection, including any ancillary costs relating thereto. If the results of the inspection determine that modifications or alterations are required to meet all applicable construction-related accessibility standards, Tenant agrees to perform such work, in its sole cost and expense and provided approvals from Landlord are obtained under the Lease, as required. Tenant agrees that all work shall be performed in a first class manner in compliance with all laws and using best efforts to minimize any disruption to the Building and other tenants or occupants, if applicable. Furthermore, Tenant agrees that any report that is generated as a result of an inspection pursuant to this section and all information contained therein, shall remain confidential, except as necessary for Tenant to complete repairs and/or correct violations, as agreed herein.

9.32. Lease Contingency. Landlord agrees to use commercially reasonable and diligent efforts to terminate the lease of the current tenant of the Leased Premises (the "Termination Contingency"). In the event that Landlord does not satisfy the Termination Contingency on or before March 31, 2017 (the "Contingency Outside Date"), then Tenant or Landlord may, by providing written notice to the other party, terminate this Lease. In the event that this Lease is terminated as set forth in this Section 9.32, Landlord shall promptly return to Tenant the Security Deposit, any prepaid Net Rent and any other amounts paid by Tenant to Landlord and neither Landlord nor Tenant shall have any further liabilities or obligations under this Lease.

9.33. Exhibits; Addenda. The following Exhibits and addenda are attached to, incorporated in and made a part of this Lease: **Exhibit A** Floor Plan of the Leased Premises; **Exhibit B** Initial Improvement of the Leased Premises; **Exhibit C** Confirmation of Term of Lease; **Exhibit D** Building Rules and Regulations; **Exhibit E** Asbestos Notification; and **Exhibit F** Removable Fixtures.

IN WITNESS WHEREOF, the parties hereto have executed this Lease as of the day and year first written above.

“LANDLORD”:

HACIENDA PORTFOLIO VENTURE LLC,
a Delaware limited liability company

By: HACIENDA VENTURE MEMBER, LLC,
a Delaware limited liability company,
its Co-Managing Member

By: PRINCIPAL REAL ESTATE INVESTORS, LLC,
a Delaware limited liability company,
its authorized signatory

By: /s/ Michael S. Benson
Michael S. Benson
Assistant Managing Director
Asset Management

By: /s/ Troy A. Koerselman
Printed Name: Troy A. Koerselman
Title: Assistant Managing Director
Asset Management

By: EPI HACIENDA LLC,
a California limited liability company,
its Managing Member

By: ELLIS PARTNERS LLC,
a California limited liability company,
its Manager

By: /s/ James F. Ellis
Printed Name: James F. Ellis
Title: Managing Member

“TENANT”

GRITSTONE ONCOLOGY, INC.,
a Delaware corporation

By: /s/ Andrew Allen
Printed Name: Andrew Allen
Title: President & CEO

EXHIBIT A

Floor Plan of the Leased Premises



SARATOGA CENTER

4696-98 Willow Rd
Pleasanton, CA

A-1

EXHIBIT B

INITIAL IMPROVEMENT OF THE LEASED PREMISES

1. Tenant Improvements. Except for the Delivery Condition items set forth in Section 2.2 of the Lease, Tenant accepts the Leased Premises in its AS IS condition existing on the date Tenant executes this Lease, and Tenant, at its sole cost, shall be responsible for all other improvement of the Leased Premises. All new work performed by Tenant or on behalf of Tenant shall be approved by Landlord in writing and shall be in a good and workmanlike manner with new, good and sufficient materials and in compliance with all applicable laws, ordinances, rules and regulations (including, without limitation, building codes and those related to accessibility and use by individuals with disabilities). Tenant shall select a contractor (the "Contractor") to construct and install the Tenant Improvements (as defined below). The Contractor, the construction budget, and materials must be approved by Landlord, which approval shall not be unreasonably withheld. The Contractor shall construct and install the improvements (the "Tenant Improvements") in the Leased Premises, substantially in accordance with plans, working drawings and specifications ("Tenant's Plans") prepared by Tenant's architect (the "Architect") and the Tenant's Plans shall be approved by Landlord, which approval shall not be unreasonably withheld. Tenant shall deliver Tenant's Plans to Landlord via hard copy and via an electronic CAD file. Within seven (7) business days after Landlord's receipt of Tenant's Plans (and five (5) business days for revisions), Landlord shall either approve such plans (with Landlord's approval not to be unreasonably withheld) or disapprove the plans. Any disapproval shall include a detailed explanation of the rejected components of the plans. If Landlord disapproves the plans, the Architect shall submit a revised version of the Tenant's Plans to Landlord for its review within five (5) business days. Tenant shall continue such approval procedure until Landlord's approval of the Tenant's Plans is obtained, then such Construction Documents shall become the "Final Construction Documents." Tenant shall promptly provide Landlord a copy of a full set of working drawings and all construction contracts with respect to the Tenant Improvements.

2. Construction Documents. The Construction Documents shall comply with all applicable codes, laws, ordinances, rules and regulations, shall not adversely affect the Building shell or core or any systems, components or elements of the Building, shall be in a form sufficient to secure the approval of all government authorities with jurisdiction over the Building, and shall be otherwise satisfactory to Landlord in Landlord's reasonable discretion. The Construction Documents shall be complete plans, working drawings and specifications for the layout, improvement and finish of the Leased Premises consistent with the design and construction of the Building, including mechanical and electrical drawings and decorating plans, showing as many of the following as possible:

- (a) Location and type of all partitions;
- (b) Location and type of all doors, with hardware and keying schedule;
- (c) Ceiling plans, including light fixtures;
- (d) Location of telephone equipment room, with all special electrical and cooling requirements;

- (e) Location and type of all electrical outlets, switches, telephone outlets, and lights;
- (f) Location of all fire/life safety systems, including, without limitation, location of all sprinklers;
- (g) Location and type of all equipment requiring special electrical requirements;
- (h) Location, weight per square foot and description of any heavy equipment or filing system exceeding fifty (50) pounds per square foot live and dead load;
- (i) Requirements for air conditioning or special ventilation;
- (j) Type and color of floor covering;
- (k) Location, type and color of wall covering;
- (l) Location, type and color of paint or finishes;
- (m) Location and type of plumbing;
- (n) Location and type of kitchen equipment;
- (o) Indicate critical dimensions necessary for construction;
- (p) Details showing all millwork with verified dimensions and dimensions of all equipment to be built in, corridor entrances, bracing or support of special walls or glass partitions, and any other items or information requested by Landlord; and
- (q) Location of all cabling.

3. Landlord's Review. Landlord's review and approval of Tenant's Plans or the Construction Documents shall not constitute, and Landlord shall not be deemed to have made, any representation or warranty as to the compliance of the Tenant Improvements with any laws or as to the suitability of the Leased Premises or the Tenant Improvements for Tenant's needs.

4. Construction. The Tenant Improvements in the Leased Premises shall be completed substantially in accordance with the Final Construction Documents by the Contractor in a good and workmanlike manner. Tenant shall promptly pay when due the entire cost of all of the Tenant Improvements (including the cost of all utilities, permits, fees, taxes, and property and liability insurance in connection therewith) required by the Final Construction Documents.

5. Landlord's Contribution; Liens; Fee. As Landlord's contribution for the costs of Tenant Plans and for the costs of constructing the Tenant Improvements, Landlord shall give Tenant an allowance in the maximum amount of Thirty Dollars (\$30.00) per rentable square foot of the Leased Premises, which equals \$1,278,600.00 based upon 42,620 rentable square feet ("Landlord's Contribution"). Landlord shall pay Landlord's Contribution to Tenant within thirty (30) days of Landlord's receipt of a written request for payment accompanied by copies of written invoices, completion lien waivers with respect to the Tenant Improvements, all required

governmental approvals with respect to the Tenant Improvements, other written evidence reasonably satisfactory to Landlord showing the costs incurred, and the Tenant Improvements Close-Out Items (as defined below). Tenant shall indemnify and protect Landlord against any liability for mechanics, materialmen's and other liens or claims with respect to the Tenant Improvements and equipment installed in the Leased Premises and shall obtain releases to liens as payments are made relating to such liens. The "Tenant Improvements Close-Out Items" shall consist of (i) a letter from the Contractor stating that there are no outstanding change orders to be signed, invoiced, or paid, and that the final invoice amount covers all monies due on project, (ii) a warranty letter from the Contractor, (iii) a certificate of completion from the architect stating that the Tenant Improvements are in compliance with the Final Construction Documents and all punch-list items have been completed, (iv) a complete and final budget for all hard and soft costs with respect to the Tenant Improvements (including, without limitation, costs for architects, consultants, and permits), (v) a subcontractor list by trade with contact information, (vi) as-built drawings (in both CAD and PDF), (vii) Building plans, MEP plans, electrical panel schedules, FLS plans (fire alarm & fire sprinkler), process piping (if applicable), and a permit set (hard copy), (viii) an unconditional lien release upon final payment to the Contractor and subcontractors and primary suppliers, and (ix) a temporary and final certificate of occupancy and a signed-off final building permit. There shall be paid to Landlord from Landlord's Contribution a construction management fee equal to one percent (1%) of the soft and hard costs of the Tenant Improvements. Any Landlord's Contribution remaining on the first day of the second Lease Year of the Term shall accrue to Landlord. In addition to Landlord's Contribution, Landlord shall give Tenant a space planning allowance in the maximum amount of (\$0.15) per rentable square foot of the Leased Premises, which equals \$6,393.00 based upon 42,620 rentable square feet (the "Space Planning Contribution"). Landlord shall pay the Space Planning Contribution to Tenant within thirty (30) days of Landlord's receipt of a written request for payment and the CAD files of the space plan.

6. Changes. Except for minor and immaterial changes, if Tenant requests any change in the Final Construction Documents, Tenant shall request such change in a written notice to Landlord.

7. Requirements for Work Performed by Tenant. All work performed at the Building or in the Project by Tenant or Tenant's contractor or subcontractors shall be subject to the following additional requirements:

(a) Such work shall not proceed until Landlord has approved in writing (which approval such not be unreasonably withheld, conditioned or delayed): (i) the amount and coverage of public liability and property damage insurance, with Landlord named as an additional insured, on such liability coverage carried by Tenant's contractor, (ii) complete and detailed plans and specifications for such work, and (iii) a schedule for the work.

(b) All work shall be done in conformity with a valid permit when required, a copy of which shall be furnished to Landlord before such work is commenced. In any case, all such work shall be performed in accordance with all applicable laws. Notwithstanding any failure by Landlord to object to any such work, Landlord shall have no responsibility for Tenant's failure to comply with applicable laws.

(c) Tenant shall be responsible for cleaning the Leased Premises, the Building and the Project and removing all debris in connection with its work. All completed work shall be subject to inspection and acceptance by Landlord. Tenant shall reimburse Landlord for the actual out-of-pocket cost for all extra expense incurred by Landlord by reason of faulty work done by Tenant or Tenant's contractor or by reason of inadequate cleanup by Tenant or Tenant's contractor.

8. Early Access. Tenant shall have access to the Leased Premises commencing on the Delivery Date in order to, among other things, construct the Tenant Improvements and install Tenant's furniture, trade fixtures, equipment, telephone networks and computer networks, and to perform general set-up for Tenant's business operations. From the date Tenant is given early access to the Leased Premises through the Term Commencement Date, Tenant shall be subject to all of the covenants in the Lease, except that Tenant's obligation to pay Rent shall commence in accordance with Section 3.3 of the Lease; provided, however, Tenant shall not exercise such right of access until it procures all required insurance and complies with all relevant insurance provisions of the Lease. Tenant shall indemnify and hold the Landlord free and harmless from any and all liens, costs, and liabilities or expenses incurred in connection with any early access of Tenant.

EXHIBIT C

CONFIRMATION OF TERM OF LEASE

This Confirmation of Term of Lease is made by and between Hacienda Portfolio Venture, LLC, a Delaware limited liability company, as Landlord, and _____, a _____, as Tenant, who agree as follows:

1. Landlord and Tenant entered into a Lease dated _____, _____ (the "Lease"), in which Landlord leased to Tenant and Tenant leased from Landlord the Leased Premises described in the Basic Lease Information sheet of the Lease (the "Leased Premises").
2. Pursuant to Section 3.1 of the Lease, Landlord and Tenant hereby confirm as follows:
 - a. _____, _____ is the Term Commencement Date;
 - b. _____, _____ is the Term Expiration Date; and
 - c. _____, _____ is the commencement date of Rent under the Lease.
3. Tenant hereby confirms that the Lease is in full force and effect and:
 - a. It has accepted possession of the Leased Premises as provided in the Lease;
 - b. The improvements and space required to be furnished by Landlord under the Lease have been furnished;
 - c. Landlord has fulfilled all its duties of an inducement nature;
 - d. The Lease has not been modified, altered or amended, except as follows: _____ and
 - e. There are no setoffs or credits against Rent and no security deposit has been paid except as expressly provided by the Lease.
4. The provisions of this Confirmation of Term of Lease shall inure to the benefit of, or bind, as the case may require, the parties and their respective successors, subject to the restrictions on assignment and subleasing contained in the Lease.

[NOTE: If Tenant fails to execute and return (or reasonably object in writing to) this Confirmation of Term of Lease within fifteen (15) days after receiving it, Tenant shall be deemed to have executed and returned it without exception.]

///signature page follows///

DATED: _____, _____

“LANDLORD”:

HACIENDA PORTFOLIO VENTURE, LLC,
a Delaware limited liability company

By: EPI HACIENDA LLC,
a California limited liability company,
Managing Member

By: ELLIS PARTNERS LLC,
a California limited liability company,
Manager

By: _____
Printed Name: _____
Title: _____

“TENANT”:

_____,
a _____

By: _____
Printed Name: _____
Title: _____

EXHIBIT D

BUILDING RULES AND REGULATIONS

1. The sidewalks, doorways, halls, vestibules and other similar areas shall not be obstructed by Tenant or used by it for any purpose other than ingress to and egress from the Leased Premises, and for going from one part of the Building to another part. Before leaving the Building, Tenant shall ensure that all doors to the Leased Premises are securely locked and all water faucets are shut off.
2. Plumbing fixtures shall be used only for their designated purpose, and no foreign substances of any kind shall be deposited therein. Damage to any such fixtures resulting from misuse by Tenant or any employee or invitee of Tenant shall be repaired at the expense of Tenant.
3. Tenant shall not place anything on or near the glass of any window, door or wall which may appear unsightly from outside the Leased Premises.
4. All contractors and technicians rendering any installation service to Tenant shall be subject to Landlord's approval and supervision prior to performing services. This applies to all work performed in the Building, including, but not limited to, installation of telephones, telegraph equipment, wiring of any kind, and electrical devices, as well as all installations affecting floors, walls, woodwork, windows, ceilings and any other physical portion of the Building.
5. Tenant shall assume all risks of damage and pay the cost of repairing or providing compensation for damage to the Building, to articles moved and injury to persons or property resulting from such moves. Landlord shall not be liable for any acts or damages resulting from any such activity.
6. Landlord shall have the right to limit the weight and size of, and to designate the location of, all safes and other heavy property brought into the Building.
7. Tenant shall cooperate with Landlord in maintaining the Leased Premises. Exterior window cleaning shall be done only by Landlord's agents at such times and during such hours as Landlord shall elect.
8. [intentionally deleted].
9. No birds, fish or animals of any kind shall be brought into or kept in, on or about the Leased Premises, with the exception of service animals where necessary.
10. No cooking shall be done in the Leased Premises except in connection with a convenience lunch room for the sole use of employees and guests (on a non-commercial basis) in a manner which complies with all of the provisions of the Lease and which does not produce fumes or odors.

11. Food, soft drink or other vending machines shall not be placed within the Leased Premises without Landlord's prior written consent.
12. Tenant shall not install or operate on the Leased Premises any electric heater, stove or similar equipment without Landlord's prior written consent. Tenant shall not use or keep on the Leased Premises any kerosene, gasoline, or inflammable or combustible fluid or material other than limited quantities reasonably necessary for the operation and maintenance of office equipment utilized at the Leased Premises. Tenant shall not keep, use, or permit to be used in or brought into the Leased Premises or Project at any time, by Tenant or any of its employees, agents or invitees, any gun, firearm, weapon, explosive device, ammunition or explosive.
13. Tenant shall not waste electricity, water or air conditioning and agrees to cooperate fully with Landlord to assure the most effective operation of the Building's heating and air conditioning and to comply with any governmental energy-saving rules, laws or regulations of which Tenant has actual notice.
14. Tenant shall not bring into (or permit to be brought into) the Building any bicycle or other type of vehicle. In no event may a hoverboard or similar type of motorized device be charged in the Leased Premises or in the Project.
15. Landlord retains the right at any time, without liability to Tenant, to change the name and street address of the Building, except as otherwise expressly provided in the Lease with respect to signage.
16. Canvassing, peddling, soliciting, and distribution of handbills in or at the Project are prohibited and Tenant will cooperate to prevent these activities.
17. Tenant shall cooperate fully with the life safety program of the Building as established and administered by Landlord. This shall include participation by Tenant and its employees in exit drills, fire inspections, life safety orientations and other programs relating to fire and life safety that may be established by Landlord.
18. No smoking shall be permitted in the Building.
19. Landlord reserves the right to rescind any of these rules and regulations and to make future rules and regulations required for the safety, protection and maintenance of the Project, the operation and preservation of the good order thereof, and the protection and comfort of the tenants and their employees and visitors. Such rules and regulations, when made and written notice thereof given to Tenant, shall be binding as if originally included herein. Landlord shall not be responsible to Tenant for the non-observance or violation of these rules and regulations by any other tenant of the Building. Landlord reserves the right to exclude or expel from the Project any person who, in Landlord's judgment, is under the influence of liquor or drugs, or who shall in any manner do any act in violation of any of these rules and regulations.

EXHIBIT E

ASBESTOS NOTIFICATION

Asbestos-containing materials (“ACMs”) were historically commonly used in the construction of commercial buildings across the country. ACMs were commonly used because of their beneficial qualities; ACMs are fire-resistant and provide good noise and temperature insulation.

Some common types of ACMs include surfacing materials (such as spray-on fireproofing, stucco, plaster and textured paint), flooring materials (such as vinyl floor tile and vinyl floor sheeting) and their associated mastics, carpet mastic, thermal system insulation (such as pipe or duct wrap, boiler wrap and cooling tower insulation), roofing materials, drywall, drywall joint tape and drywall joint compound, acoustic ceiling tiles, transite board, base cove and associated mastic, caulking, window glazing and fire doors. These materials are not required under law to be removed from any building (except prior to demolition and certain renovation projects). Moreover, ACMs generally are not thought to present a threat to human health unless they cause a release of asbestos fibers into the air, which does not typically occur unless (1) the ACMs are in a deteriorated condition, or (2) the ACMs have been significantly disturbed (such as through abrasive cleaning, or maintenance or renovation activities).

It is possible that some of the various types of ACMs noted above (or other types) are present at various locations in the Building. Anyone who finds any such materials in the Building should assume them to contain asbestos unless those materials are properly tested and found to be otherwise. In addition, Landlord has identified the presence of certain ACMs in the Building. For information about the specific types and locations of these identified ACMs, please contact the Building manager. The Building manager maintains records of the Building’s asbestos information including any Building asbestos surveys, sampling and abatement reports. This information is maintained as part of Landlord’s asbestos Operations and Maintenance Plan (“O&M Plan”).

The O&M Plan is designed to minimize the potential of any harmful asbestos exposure to any person in the Building. Because Landlord is not a physician, scientist or industrial hygienist, Landlord has no special knowledge of the health impact of exposure to asbestos. Therefore, Landlord hired an independent environmental consulting firm to prepare the Building’s O&M Plan. The O&M Plan includes a schedule of actions to be taken in order to (1) maintain any building ACMs in good condition, and (2) to prevent any significant disturbance of such ACMs. Appropriate Landlord personnel receive regular periodic training on how to properly administer the O&M Plan.

The O&M Plan describes the risks associated with asbestos exposure and how to prevent such exposure. The O&M Plan describes those risks, in general, as follows: asbestos is not a significant health concern unless asbestos fibers are released and inhaled. If inhaled, asbestos fibers can accumulate in the lungs and, as exposure increases, the risk of disease (such as asbestosis and cancer) increases. However, measures taken to minimize exposure and consequently minimize the accumulation of fibers can reduce the risk of adverse health effects.

The O&M Plan also describes a number of activities which should be avoided in order to prevent a release of asbestos fibers. In particular, some of the activities which may present a health risk (because those activities may cause an airborne release of asbestos fibers) include moving, drilling, boring or otherwise disturbing ACMs. Consequently, such activities should not be attempted by any person not qualified to handle ACMs. In other words, the approval of Building management must be obtained prior to engaging in any such activities. Please contact the Building manager for more information in this regard. A copy of the written O&M Plan for the Building is located in the management office for the Building and, upon your request, will be made available to tenants for you to review and copy during regular business hours.

Because of the presence of ACM in the Building, we are also providing the following warning, which is commonly known as a California Proposition 65 warning:

WARNING: This building contains asbestos, a chemical known to the State of California to cause cancer.

Please contact the Building manager with any questions regarding the contents of this **Exhibit E**.

EXHIBIT F

REMOVABLE FIXTURES

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[***] Certain information in this document has been omitted and filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to the omitted portions.

GRITSTONE ONCOLOGY, INC.
2015 EQUITY INCENTIVE PLAN

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GRITSTONE ONCOLOGY, INC.
2015 EQUITY INCENTIVE PLAN
Adopted August 28, 2015

1. **Purposes of the Plan.** The purposes of the Gritstone Oncology, Inc. 2015 Equity Incentive Plan are to attract and retain the best available personnel for positions of substantial responsibility, to provide additional incentive to Employees, Directors, and Consultants, and to promote the success of the Company's business. Options granted under the Plan may be Incentive Stock Options or Non-Qualified Stock Options, as determined by the Administrator at the time of grant. Stock Purchase Rights may also be granted under the Plan.

2. **Definitions.** As used herein, the following definitions shall apply:

(a) "**Administrator**" means the Board or the Committee responsible for conducting the general administration of the Plan, as applicable, in accordance with Section 4 hereof.

(b) "**Applicable Laws**" means the requirements relating to the administration of stock option plans under U.S. state corporate laws, U.S. federal and state securities laws, the Code, any stock exchange or quotation system on which the Common Stock is listed or quoted, and the applicable laws of any foreign country or jurisdiction where Options or Stock Purchase Rights are granted under the Plan.

(c) "**Board**" means the Board of Directors of the Company.

(d) "**Change in Control**" shall mean and include each of the following:

(i) a dissolution or liquidation of the Company;

(ii) a merger or consolidation in which the Company is not the surviving corporation (other than a merger or consolidation with a wholly-owned subsidiary, a reincorporation of the Company in a different jurisdiction, or other transaction in which there is no substantial change in the stockholders of the Company or their relative stock holdings and the Options and Stock Purchase Rights granted under this Plan are assumed, converted or replaced by the successor or acquiring corporation, which assumption, conversion or replacement will be binding on all Holders);

(iii) a merger in which the Company is the surviving corporation but after which the stockholders of the Company immediately prior to such merger (other than any stockholder which merges with the Company in such merger, or which owns or controls another corporation which merges with the Company in such merger) cease to own at least a majority of the combined voting power of the surviving corporation's outstanding voting securities immediately after the transaction; or

(iv) the sale of all or substantially all of the assets of the Company.

The Administrator shall have full and final authority, which shall be exercised in its sole discretion, to determine conclusively whether a Change in Control has occurred pursuant to the above definition, and the date of the occurrence of such Change in Control and any incidental matters relating thereto.

(e) “Code” means the Internal Revenue Code of 1986, as amended, or any successor statute or statutes thereto. Reference to any particular Code section shall include any successor section.

(f) “Committee” means a committee appointed by the Board in accordance with Section 4 hereof.

(g) “Common Stock” means the common stock of the Company.

(h) “Company” means Gritstone Oncology, Inc., a Delaware corporation.

(i) “Consultant” means any consultant or adviser if: (i) the consultant or adviser renders *bona fide* services to the Company or any Parent or Subsidiary of the Company; (ii) the services rendered by the consultant or adviser are not in connection with the offer or sale of securities in a capital-raising transaction and do not directly or indirectly promote or maintain a market for the Company’s securities; and (iii) the consultant or adviser is a natural person.

(j) “Director” means a member of the Board.

(k) “Disability” means total and permanent disability within the meaning of Section 22(e)(3) of the Code.

(l) “Employee” means any person, including an Officer or Director, who is an employee (as defined in accordance with Section 3401(c) of the Code) of the Company or any Parent or Subsidiary of the Company. A Service Provider shall not cease to be an Employee in the case of (i) any leave of absence approved by the Company or (ii) transfers between locations of the Company or between the Company, its Parent, any Subsidiary, or any successor. For purposes of Incentive Stock Options, no such leave may exceed ninety (90) days, unless reemployment upon expiration of such leave is guaranteed by statute or contract. Neither service as a Director nor payment of a director’s fee by the Company shall be sufficient, by itself, to constitute “employment” by the Company.

(m) “Equity Restructuring” shall mean a non-reciprocal transaction between the Company and its stockholders, such as a stock dividend, stock split, spin-off, rights offering, or recapitalization through a large, nonrecurring cash dividend, that affects the shares of Common Stock (or other securities of the Company) or the share price of Common Stock (or other securities) and causes a change in the per share value of the Common Stock underlying outstanding awards granted under the Plan.

(n) “Exchange Act” means the Securities Exchange Act of 1934, as amended, or any successor statute or statutes thereto. Reference to any particular Exchange Act section shall include any successor section.

(o) "Fair Market Value" means, as of any date, the value of a share of Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or a national market system, its Fair Market Value shall be the closing sales price for a share of such stock (or the closing bid, if no sales were reported) as quoted on such exchange or system for such date, or if no bids or sales were reported for such date, then the closing sales price (or the closing bid, if no sales were reported) on the trading date immediately prior to such date during which a bid or sale occurred, in each case, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable;

(ii) If the Common Stock is regularly quoted by a recognized securities dealer but selling prices are not reported, its Fair Market Value shall be the mean between the high bid and low asked prices for a share of the Common Stock on such date, or if no closing bid and asked prices were reported for such date, the date immediately prior to such date during which closing bid and asked prices were quoted for such Common Stock, in each case, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable; or

(iii) In the absence of an established market for the Common Stock, the Fair Market Value thereof shall be determined by the Administrator.

(p) "Holder" means a person who has been granted or awarded an Option or Stock Purchase Right or who holds Shares acquired pursuant to the exercise of an Option or Stock Purchase Right.

(q) "Incentive Stock Option" means an Option intended to qualify as an incentive stock option within the meaning of Section 422 of the Code and which is designated as an Incentive Stock Option by the Administrator.

(r) "Independent Director" means a Director who is not an Employee of the Company.

(s) "Non-Qualified Stock Option" means an Option (or portion thereof) that is not designated as an Incentive Stock Option by the Administrator, or which is designated as an Incentive Stock Option by the Administrator but fails to qualify as an incentive stock option within the meaning of Section 422 of the Code.

(t) "Officer" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act and the rules and regulations promulgated thereunder.

(u) "Option" means a stock option granted pursuant to the Plan.

(v) "Option Agreement" means a written agreement between the Company and a Holder evidencing the terms and conditions of an individual Option grant. The Option Agreement is subject to the terms and conditions of the Plan.

(w) “Parent” means any corporation (or other entity), whether now or hereafter existing (other than the Company), in an unbroken chain of corporations (or other entities) ending with the Company if each of the corporations (or other entities) other than the last corporation (or other entity) in the unbroken chain owns stock (or other equity interests) possessing more than fifty percent (50%) of the total combined voting power of all classes of stock (or other equity interests) in one of the other corporations (or other entities) in such chain.

(x) “Plan” means the Gritstone Oncology, Inc. 2015 Equity Incentive Plan.

(y) “Public Trading Date” means the first date upon which Common Stock of the Company is listed (or approved for listing) upon notice of issuance on any securities exchange or designated (or approved for designation) upon notice of issuance as a national market security on an interdealer quotation system.

(z) “Restricted Stock” means Shares acquired pursuant to the exercise of an unvested Option in accordance with Section 10(h) below or pursuant to a Stock Purchase Right granted under Section 12 below.

(aa) “Restricted Stock Purchase Agreement” means a written agreement between the Company and a Holder evidencing the terms and conditions of the Holder’s purchase of Restricted Stock pursuant to the exercise of an unvested Option in accordance with Section 10(h) below or a Stock Purchase Right granted under Section 12 below.

(bb) “Rule 16b-3” means that certain Rule 16b-3 under the Exchange Act, as such Rule may be amended from time to time.

(cc) “Section 16(b)” means Section 16(b) of the Exchange Act, as such Section may be amended from time to time.

(dd) “Securities Act” means the Securities Act of 1933, as amended, or any successor statute or statutes thereto. Reference to any particular Securities Act section shall include any successor section.

(ee) “Service Provider” means an Employee, Director, or Consultant.

(ff) “Share” means a share of Common Stock, as adjusted in accordance with Section 13 below.

(gg) “Stock Purchase Right” means a right to purchase Common Stock pursuant to Section 12 below.

(hh) “Subsidiary” means any corporation (or other entity), whether now or hereafter existing (other than the Company), in an unbroken chain of corporations (or other entities) beginning with the Company if each of the corporations (or other entities) other than the last corporation (or other entity) in the unbroken chain owns stock possessing more than fifty percent (50%) of the total combined voting power of all classes of stock in one of the other corporations (or other entities) in such chain.

3. **Stock Subject to the Plan.** Subject to the provisions of Section 13 hereof, the shares of stock subject to Options or Stock Purchase Rights shall be Common Stock. Subject to the provisions of Section 13 hereof, the maximum aggregate number of Shares which may be issued upon exercise of such Options or Stock Purchase Rights is 18,611,110 (the "**Total Authorized Shares**"). Shares issued upon exercise of Options or Stock Purchase Rights may be authorized but unissued, or reacquired Common Stock. If an Option or Stock Purchase Right expires or becomes unexercisable without having been exercised in full, the unpurchased Shares which were subject thereto shall become available for future grant or sale under the Plan (unless the Plan has terminated). Shares which are delivered by the Holder or withheld by the Company upon the exercise of an Option or Stock Purchase Right under the Plan, in payment of the exercise price thereof or tax withholding thereon, may again be optioned, granted, or awarded hereunder, subject to the limitations of this Section 3. If Shares of Restricted Stock are repurchased by the Company at their original purchase price, such Shares shall become available for future grant under the Plan (unless the Plan has terminated). Notwithstanding the provisions of this Section 3, no Shares may again be optioned, granted, or awarded if such action would cause an Incentive Stock Option to fail to qualify as an Incentive Stock Option under Code Section 422.

4. **Administration of the Plan.**

(a) **Administrator.** Unless and until the Board delegates administration to a Committee as set forth below, the Plan shall be administered by the Board. The Board may delegate administration of the Plan to a Committee or Committees of one (1) or more members of the Board, and the term "Committee" shall apply to any person or persons to whom such authority has been delegated. If administration is delegated to a Committee, the Committee shall have, in connection with the administration of the Plan, the powers theretofore possessed by the Board, including the power to delegate to a subcommittee any of the administrative powers the Committee is authorized to exercise (and references in the Plan to the Board shall thereafter be to the Committee or subcommittee), subject, however, to such resolutions, not inconsistent with the provisions of the Plan, as may be adopted from time to time by the Board. Notwithstanding the foregoing, however, unless otherwise determined by the Board, from and after the Public Trading Date, a Committee of the Board shall administer the Plan and the Committee shall consist solely of two (2) or more Independent Directors each of whom is an "outside director," within the meaning of Section 162(m) of the Code, a "non-employee director" within the meaning of Rule 16b-3, and qualifies as "independent" within the meaning of any applicable stock exchange listing requirements. Members of the Committee shall also satisfy any other legal requirements applicable to membership on the Committee, including requirements under the Sarbanes-Oxley Act of 2002 and other Applicable Laws. Within the scope of such authority, the Board or the Committee may (i) delegate to a committee of one (1) or more members of the Board who are not Independent Directors the authority to grant awards under the Plan to eligible persons who are either (1) not then "covered employees," within the meaning of Section 162(m) of the Code and are not expected to be "covered employees" at the time of recognition of income resulting from such award or (2) not persons with respect to whom the Company wishes to comply with Section 162(m) of the Code and/or (ii) delegate to a committee of one (1) or more members of the Board who are not "non-employee directors," within the meaning of Rule 16b-3, the authority to grant awards under the Plan to eligible persons who are not then subject to Section 16 of the Exchange Act. The Board may abolish the Committee at any time and revert in the Board the administration of the Plan. Appointment of Committee members shall be effective upon acceptance of appointment. Committee members may resign at any time by delivering written notice to the Board. Vacancies in the Committee may only be filled by the Board.

(b) Powers of the Administrator. Subject to the provisions of the Plan and the specific duties delegated by the Board to such Committee, and subject to the approval of any relevant authorities, the Administrator shall have the authority in its sole discretion:

(i) to determine the Fair Market Value;

(ii) to select the Service Providers to whom Options and Stock Purchase Rights may from time to time be granted hereunder;

(iii) to determine the number of Shares to be covered by each such award granted hereunder;

(iv) to approve forms of agreement for use under the Plan;

(v) to determine the terms and conditions of any Option or Stock Purchase Right granted hereunder (such terms and conditions include, but are not limited to, the exercise price, the time or times when Options or Stock Purchase Rights may vest or be exercised (which may be based on performance criteria), any vesting acceleration or waiver of forfeiture restrictions, and any restriction or limitation regarding any Option or Stock Purchase Right or the Common Stock relating thereto, based in each case on such factors as the Administrator, in its sole discretion, shall determine);

(vi) to determine whether to offer to buyout a previously granted Option as provided in Section 10(i) hereof and to determine the terms and conditions of such offer and buyout (including whether payment is to be made in cash or Shares);

(vii) to prescribe, amend, and rescind rules and regulations relating to the Plan, including rules and regulations relating to sub-plans established for the purpose of qualifying for preferred tax treatment under foreign tax laws;

(viii) to allow Holders to satisfy withholding tax obligations by electing to have the Company withhold from the Shares to be issued upon exercise of an Option or Stock Purchase Right that number of Shares having a Fair Market Value equal to the minimum amount required to be withheld based on the statutory withholding rates for federal and state tax purposes that apply to supplemental taxable income. The Fair Market Value of the Shares to be withheld shall be determined on the date that the amount of tax to be withheld is to be determined. All elections by Holders to have Shares withheld for this purpose shall be made in such form and under such conditions as the Administrator may deem necessary or advisable;

(ix) to amend the Plan or any Option or Stock Purchase Right granted under the Plan as provided in Section 15 hereof; and

(x) to construe and interpret the terms of the Plan and awards granted pursuant to the Plan and to exercise such powers and perform such acts as the Administrator deems necessary or desirable to promote the best interests of the Company which are not in conflict with the express written provisions of the Plan.

(c) Effect of Administrator's Decision. All decisions, determinations, and interpretations of the Administrator shall be final and binding on all Holders.

5. Eligibility. Non-Qualified Stock Options and Stock Purchase Rights may be granted to Service Providers. Incentive Stock Options may be granted only to Employees of the Company (or a "parent corporation" or "subsidiary corporation" thereof within the meaning of Code Sections 424(e) or 424(f), respectively). If otherwise eligible, a Service Provider who has been granted an Option or Stock Purchase Right may be granted additional Options or Stock Purchase Rights.

6. Limitations.

(a) Designations. Each Option shall be designated by the Administrator in the Option Agreement as either an Incentive Stock Option or a Non-Qualified Stock Option. However, notwithstanding such designations, to the extent that the aggregate Fair Market Value of Shares subject to a Holder's Incentive Stock Options and other incentive stock options granted by the Company (or a "parent corporation" or "subsidiary corporation" thereof within the meaning of Code Sections 424(e) or 424(f), respectively), which become exercisable for the first time during any calendar year (under all plans of the Company or any such parent or subsidiary) exceeds one hundred thousand dollars (\$100,000), such excess Options or other options shall be treated as Non-Qualified Stock Options. If the Code is amended to provide for a different limitation from that set forth in the preceding sentence, such different limitation shall be deemed incorporated herein effective as of the date and with respect to such Options as required or permitted by such amendment to the Code.

For purposes of this Section 6(a), Incentive Stock Options shall be taken into account in the order in which they were granted, and the Fair Market Value of the Shares shall be determined as of the time of grant.

(b) Employment or Consulting Relationship at Will. Neither the Plan, any Option, nor any Stock Purchase Right shall confer upon a Holder any right with respect to continuing the Holder's employment or consulting relationship with the Company, nor shall they interfere in any way with the Holder's right or the Company's right to terminate such employment or consulting relationship at any time, with or without cause.

(c) Options or Stock Purchase Rights Granted. No Service Provider shall be granted, in any calendar year, Options or Stock Purchase Rights to purchase more than the Total Authorized Shares; provided, however, that the foregoing limitation shall not apply prior to the Public Trading Date, and, following the Public Trading Date, the foregoing limitation shall not apply until the earliest of: (i) the first material modification of the Plan (including any increase in the number of shares reserved for issuance under the Plan in accordance with Section 3 hereof); (ii) the issuance of all of the shares of Common Stock reserved for issuance under the Plan; (iii) the expiration of the Plan; (iv) the first meeting of stockholders at which Directors of the Company are to be elected that occurs after the close of the third calendar year following the calendar year

in which occurred the first registration of an equity security of the Company under Section 12 of the Exchange Act; or (v) such other date required by Section 162(m) of the Code and the rules and regulations promulgated thereunder. The foregoing limitation shall be adjusted proportionately in connection with any change in the Company's capitalization as described in Section 13 hereof. For purposes of this Section 6(c), if an Option is canceled in the same calendar year it was granted (other than in connection with a transaction described in Section 13 hereof), the canceled Option will be counted against the limit set forth in this Section 6(c). For this purpose, if the exercise price of an Option is reduced, the transaction shall be treated as a cancellation of the Option and the grant of a new Option.

7. **Term of Plan.** The Plan shall become effective upon its initial adoption by the Board and shall continue in effect until it is terminated under Section 15 hereof. No Options or Stock Purchase Rights may be issued under the Plan after the tenth (10th) anniversary of the earlier of (a) the date upon which the Plan is adopted by the Board or (b) the date the Plan is approved by the stockholders.

8. **Term of Option.** The term of each Option shall be stated in the Option Agreement; provided, however, that the term shall be no more than ten (10) years from the date of grant thereof. In the case of an Incentive Stock Option granted to a Holder who, at the time the Option is granted, owns (or is treated as owning under Code Section 424) stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company (or a "parent corporation" or "subsidiary corporation" thereof within the meaning of Code Sections 424(e) or 424(f), respectively), the term of the Option shall be five (5) years from the date of grant or such shorter term as may be provided in the Option Agreement.

9. **Option Exercise Price and Consideration.**

(a) Per Share Exercise Price. Except as provided in Section 13 hereof, the per share exercise price for the Shares to be issued upon exercise of an Option shall be such price as is determined by the Administrator, but shall be subject to the following:

(i) In the case of an Incentive Stock Option

(A) granted to an Employee who, at the time of grant of such Option, owns (or is treated as owning under Code Section 424) stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company (or a "parent corporation" or "subsidiary corporation" thereof within the meaning of Code Sections 424(e) or 424(f), respectively), the per Share exercise price shall be no less than one hundred ten percent (110%) of the Fair Market Value per Share on the date of grant.

(B) granted to any other Employee, the per Share exercise price shall be no less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant.

(ii) In the case of a Non-Qualified Stock Option, the per Share exercise price shall be no less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant.

(iii) Notwithstanding the foregoing, an Option may be granted with a per Share exercise price other than as required above if such Option is granted as an assumption of or in substitution for another option in connection with a merger or other corporate transaction.

(b) Consideration. The consideration to be paid for the Shares to be issued upon exercise of an Option, including the method of payment, shall be determined by the Administrator (and, in the case of an Incentive Stock Option, shall be determined at the time of grant). Such consideration may consist of (1) cash; (2) check; (3) with the consent of the Administrator, a full recourse promissory note bearing interest (at no less than such rate as is a market rate of interest and which then precludes the imputation of interest under the Code), payable upon such terms as may be prescribed by the Administrator, and structured to comply with Applicable Laws; (4) with the consent of the Administrator, other Shares which have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which such Option shall be exercised; (5) with the consent of the Administrator, surrendered Shares then issuable upon exercise of the Option having a Fair Market Value on the date of exercise equal to the aggregate exercise price of the Option or exercised portion thereof; (6) with the consent of the Administrator, property of any kind which constitutes good and valuable consideration; (7) with the consent of the Administrator, delivery of a notice that the Holder has placed a market sell order with a broker with respect to Shares then issuable upon exercise of the Options and that the broker has been directed to pay a sufficient portion of the net proceeds of the sale to the Company in satisfaction of the Option exercise price, provided, that payment of such proceeds is then made to the Company upon settlement of such sale; or (8) with the consent of the Administrator, any combination of the foregoing methods of payment.

10. Exercise of Option.

(a) Vesting; Fractional Exercises. Except as provided in Section 13 hereof, Options granted hereunder shall be vested and exercisable according to the terms hereof at such times and under such conditions as determined by the Administrator and set forth in the Option Agreement. An Option may not be exercised for a fraction of a Share.

(b) Deliveries upon Exercise. All or a portion of an exercisable Option shall be deemed exercised upon delivery of all of the following to the Secretary of the Company, his or her office, or such other authorized representative of the Company:

(i) A written or electronic notice complying with the applicable rules established by the Administrator stating that the Option, or a portion thereof, is exercised. The notice shall be signed or transmitted electronically, as applicable, by the Holder or other person then entitled to exercise the Option or such portion of the Option;

(ii) Such representations and documents as the Administrator, in its sole discretion, deems necessary or advisable to effect compliance with Applicable Laws. The Administrator may, in its sole discretion, also take whatever additional actions it deems appropriate to effect such compliance, including, without limitation, placing legends on share certificates and issuing stop transfer notices to agents and registrars;

(iii) Upon the exercise of all or a portion of an unvested Option pursuant to Section 10(h) hereof, a Restricted Stock Purchase Agreement in a form determined by the Administrator and signed by the Holder or other person then entitled to exercise the Option or such portion of the Option; and

(iv) In the event that the Option shall be exercised pursuant to Section 10(f) hereof by any person or persons other than the Holder, appropriate proof of the right of such person or persons to exercise the Option.

(c) Conditions to Delivery of Share Certificates. The Company shall not be required to issue or deliver any certificate or certificates for Shares purchased upon the exercise of any Option or portion thereof nor shall the Holder thereof be deemed to be a stockholder of the Company prior to fulfillment of all of the following conditions:

(i) The admission of such Shares to listing on all stock exchanges on which such class of stock is then listed;

(ii) The completion of any registration or other qualification of such Shares under any state or federal law, or under the rulings or regulations of the Securities and Exchange Commission or any other governmental regulatory body which the Administrator shall, in its sole discretion, deem necessary or advisable;

(iii) The obtaining of any approval or other clearance from any state or federal governmental agency which the Administrator shall, in its sole discretion, determine to be necessary or advisable;

(iv) The lapse of such reasonable period of time following the exercise of the Option as the Administrator may establish from time to time for reasons of administrative convenience; and

(v) The receipt by the Company of full payment for such Shares, including payment of any applicable withholding tax, which in the sole discretion of the Administrator may be in the form of consideration used by the Holder to pay for such Shares under Section 9(b) hereof.

(d) Termination of Relationship as a Service Provider. If a Holder ceases to be a Service Provider other than by reason of the Holder's Disability or death, such Holder may exercise his or her Option within such period of time as is specified in the Option Agreement to the extent that the Option is vested on the date of exercise; provided, however, that, prior to the Public Trading Date, to the extent required by Applicable Law, such period of time shall not be less than thirty (30) days (but in no event later than the expiration of the term of the Option as set forth in the Option Agreement). In the absence of a specified time in the Option Agreement, the Option shall remain exercisable for three (3) months following the Holder's termination. If, after termination, the Holder does not exercise his or her Option within the time period specified, herein, the Option shall terminate, and the Shares covered by such Option shall again become available for issuance under the Plan.

(e) Disability of Holder. If a Holder ceases to be a Service Provider as a result of the Holder's Disability, the Holder may exercise his or her Option within such period of time as is specified in the Option Agreement to the extent the Option is vested on the date of exercise; provided, however, that prior to the Public Trading Date, to the extent required by Applicable Law, such period of time shall not be less than six (6) months (but in no event later than the expiration of the term of such Option as set forth in the Option Agreement). In the absence of a specified time in the Option Agreement, the Option shall remain exercisable for twelve (12) months following the Holder's termination. If, after termination, the Holder does not exercise his or her Option within the time specified, herein, the Option shall terminate, and the Shares covered by such Option shall again become available for issuance under the Plan.

(f) Death of Holder. If a Holder dies while a Service Provider, the Option may be exercised within such period of time as is specified in the Option Agreement; provided, however, that prior to the Public Trading Date, to the extent required by Applicable Law, such period of time shall not be less than six (6) months (but in no event later than the expiration of the term of such Option as set forth in the Option Agreement), by the Holder's estate or by a person who acquires the right to exercise the Option by bequest or inheritance, but only to the extent that the Option is vested on the date of exercise. In the absence of a specified time in the Option Agreement, the Option shall remain exercisable for twelve (12) months following the Holder's termination. The Option may be exercised by the executor or administrator of the Holder's estate or, if none, by the person(s) entitled to exercise the Option under the Holder's will or the laws of descent or distribution. If the Option is not so exercised within the time specified, herein, the Option shall terminate, and the Shares covered by such Option shall again become available for issuance under the Plan.

(g) Regulatory Extension. A Holder's Option Agreement may provide that if the exercise of the Option following the termination of the Holder's status as a Service Provider would be prohibited at any time solely because the issuance of shares would violate the registration requirements under the Securities Act, then the Option shall terminate on the earlier of (i) the expiration of the term of the Option set forth in Section 8 hereof or (ii) the expiration of a period of three (3) months after the termination of the Holder's status as a Service Provider during which the exercise of the Option would not be in violation of such registration requirements.

(h) Early Exercisability. The Administrator may provide in the terms of a Holder's Option Agreement that the Holder may, at any time before the Holder's status as a Service Provider terminates, exercise the Option in whole or in part prior to the full vesting of the Option; provided, however, that subject to Section 19 hereof, Shares acquired upon exercise of an Option which has not fully vested may be subject to any forfeiture, transfer, or other restrictions as the Administrator may determine in its sole discretion.

(i) Buyout Provisions. The Administrator may at any time offer to buyout for a payment in cash or Shares, an Option previously granted, based on such terms and conditions as the Administrator shall establish and communicate to the Holder at the time that such offer is made.

11. Non-Transferability of Options and Stock Purchase Rights. Options and Stock Purchase Rights may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or by the laws of descent or distribution and may be exercised, during the lifetime of the Holder, only by the Holder.

12. Stock Purchase Rights.

(a) Rights to Purchase. Stock Purchase Rights may be issued either alone, in addition to, or in tandem with Options granted under the Plan and/or cash awards made outside of the Plan. After the Administrator determines that it will offer Stock Purchase Rights under the Plan, it shall advise the offeree in writing of any terms, conditions, and/or restrictions related to the offer, including the number of Shares that such person shall be entitled to purchase, the price to be paid, and the time within which such person must accept such offer. The offer shall be accepted by execution of a Restricted Stock Purchase Agreement in the form determined by the Administrator.

(b) Repurchase Right. Unless the Administrator determines otherwise, any Restricted Stock Purchase Agreement shall grant the Company the right to repurchase Shares acquired upon exercise of a Stock Purchase Right upon the termination of the purchaser's status as a Service Provider for any reason. Subject to Section 19 hereof, the purchase price for Shares repurchased by the Company pursuant to any such repurchase right and the rate at which any such repurchase right shall lapse shall be determined by the Administrator in its sole discretion, and shall be set forth in the Restricted Stock Purchase Agreement.

(c) Other Provisions. Any Restricted Stock Purchase Agreement shall contain such other terms, provisions, and conditions not inconsistent with the Plan as may be determined by the Administrator in its sole discretion.

(d) Rights as a Stockholder. Once the Stock Purchase Right is exercised, the purchaser shall have rights equivalent to those of a stockholder and shall be a stockholder when his or her purchase is entered upon the stock records of the Company. No adjustment shall be made for a dividend or other right for which the record date is prior to the date the Stock Purchase Right is exercised, except as provided in Section 13 hereof.

13. Adjustments upon Changes in Capitalization, Merger, or Asset Sale.

(a) Adjustments Authorized. In the event that the Administrator determines that, other than with respect to an Equity Restructuring, any dividend or other distribution (whether in the form of cash, Common Stock, other securities, or other property), reorganization, merger, consolidation, combination, repurchase, liquidation, dissolution, or sale, transfer, exchange, or other disposition of all or substantially all of the assets of the Company, or exchange of Common Stock or other securities of the Company, issuance of warrants or other rights to purchase Common Stock or other securities of the Company, or other similar corporate transaction or event, in the Administrator's sole discretion, affects the Common Stock such that an adjustment is determined by the Administrator to be appropriate in order to prevent dilution or enlargement of the benefits or potential benefits intended by the Company to be made available under the Plan or with respect to any Option, Stock Purchase Right, or Restricted Stock, then the Administrator shall, in such manner as it may deem equitable, adjust any or all of:

(i) the number and kind of shares of Common Stock (or other securities or property) with respect to which Options or Stock Purchase Rights may be granted or awarded (including, but not limited to, adjustments of the limitations in Section 3 hereof on the maximum number and kind of shares which may be issued and adjustments of the maximum number of Shares that may be purchased by any Holder in any calendar year pursuant to Section 6(c) hereof);

(ii) the number and kind of shares of Common Stock (or other securities or property) subject to outstanding Options, Stock Purchase Rights, or Restricted Stock; and

(iii) the grant or exercise price with respect to any Option or Stock Purchase Right.

(b) Adjustment Actions Authorized. In the event of any transaction or event described in Section 13(a) hereof, the Administrator, in its sole discretion, and on such terms and conditions as it deems appropriate, either by the terms of the Option, Stock Purchase Right, or Restricted Stock or by action taken prior to the occurrence of such transaction or event and either automatically or upon the Holder's request, is hereby authorized to take any one or more of the following actions whenever the Administrator determines that such action is appropriate in order to prevent dilution or enlargement of the benefits or potential benefits intended by the Company to be made available under the Plan or with respect to any Option, Stock Purchase Right, or Restricted Stock granted or issued under the Plan or to facilitate such transaction or event:

(i) To provide for either the purchase of any such Option, Stock Purchase Right, or Restricted Stock for an amount of cash equal to the amount that could have been obtained upon the exercise of such Option or Stock Purchase Right or realization of the Holder's rights had such Option, Stock Purchase Right, or Restricted Stock been currently exercisable or payable or fully vested or the replacement of such Option, Stock Purchase Right, or Restricted Stock with other rights or property selected by the Administrator in its sole discretion;

(ii) To provide that such Option or Stock Purchase Right shall be exercisable as to all shares covered thereby, notwithstanding anything to the contrary in the Plan or the provisions of such Option or Stock Purchase Right;

(iii) To provide that such Option, Stock Purchase Right, or Restricted Stock be assumed by the successor or survivor corporation, or a parent or subsidiary thereof, or shall be substituted for by similar options, rights, or awards covering the stock of the successor or survivor corporation, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and prices;

(iv) To make adjustments in the number and type of shares of Common Stock (or other securities or property) subject to outstanding Options and Stock Purchase Rights, and/or in the terms and conditions of (including the grant or exercise price), and the criteria included in, outstanding Options, Stock Purchase Rights, or Restricted Stock or Options, Stock Purchase Rights, or Restricted Stock which may be granted in the future; and/or

(v) To provide that immediately upon the consummation of such event, such Option or Stock Purchase Right shall not be exercisable and shall terminate; provided, that for a specified period of time prior to such event, such Option or Stock Purchase Right shall be exercisable as to all Shares covered thereby, and the restrictions imposed under an Option Agreement or Restricted Stock Purchase Agreement upon some or all Shares may be terminated and, in the case of Restricted Stock, some or all shares of such Restricted Stock may cease to be subject to repurchase, notwithstanding anything to the contrary in the Plan or the provisions of such Option, Stock Purchase Right, or Restricted Stock Purchase Agreement.

(c) Proportional Adjustments. In connection with the occurrence of any Equity Restructuring, and notwithstanding anything to the contrary in Section 13(a) and 13(b) hereof:

(i) The number and type of securities subject to each outstanding Option or Stock Purchase Right and the exercise price or grant price thereof, if applicable, will be proportionately adjusted. The adjustments provided under this Section 13(c)(i) shall be nondiscretionary and shall be final and binding on the affected Holder and the Company.

(ii) The Administrator shall make such proportionate adjustments, if any, as the Administrator in its sole discretion may deem appropriate to reflect such Equity Restructuring with respect to the aggregate number and kind of shares that may be issued under the Plan (including, but not limited to, adjustments of the limitations in Section 3 hereof).

(d) Change in Control. If the Company undergoes a Change in Control, then any surviving corporation or entity or acquiring corporation or entity, or affiliate of such corporation or entity, may assume any Options, Stock Purchase Rights, and/or Restricted Stock outstanding under the Plan or may substitute similar stock awards (including an award to acquire the same consideration paid to the stockholders in the transaction described in this Section 13(d)) for those outstanding under the Plan. In the event any surviving corporation or entity or acquiring corporation or entity in a Change in Control, or affiliate of such corporation or entity, does not assume such Options, Stock Purchase Rights, or Restricted Stock or does not substitute similar stock awards for those outstanding under the Plan, then with respect to (i) Options, Stock Purchase Rights, and Restricted Stock held by participants in the Plan whose status as a Service Provider has not terminated prior to such event, the vesting of such Options, Stock Purchase Rights, and Restricted Stock (and, if applicable, the time during which such awards may be exercised) shall be accelerated and made fully exercisable and all restrictions thereon shall lapse at least ten (10) days prior to the closing of the Change in Control (and the Options or Stock Purchase Rights terminated if not exercised prior to the closing of such Change in Control) and (ii) any other Options or Stock Purchase Rights outstanding under the Plan, such Options and Stock Purchase Rights shall be terminated if not exercised prior to the closing of the Change in Control.

(e) Further Provisions and Limitations. Subject to Section 3 hereof, the Administrator may, in its sole discretion, include such further provisions and limitations in any Option, Stock Purchase Right, Restricted Stock Purchase Agreement, or certificate, as it may deem equitable and in the best interests of the Company.

(f) No Effect or Restrictions. The existence of the Plan, any Option Agreement or Restricted Stock Purchase Agreement, and the Options or Stock Purchase Rights granted hereunder shall not affect or restrict in any way the right or power of the Company or the stockholders of the Company to make or authorize any adjustment, recapitalization, reorganization, or other change in the Company's capital structure or its business, any merger or

consolidation of the Company, any issue of stock or of options, warrants, or rights to purchase stock or of bonds, debentures, preferred, or prior preference stocks whose rights are superior to or affect the Common Stock or the rights thereof or which are convertible into or exchangeable for Common Stock, or the dissolution or liquidation of the Company, or any sale or transfer of all or any part of its assets or business, or any other corporate act or proceeding, whether of a similar character or otherwise.

14. **Time of Granting Options and Stock Purchase Rights.** The date of grant of an Option or Stock Purchase Right shall be, for all purposes, the date on which the Administrator makes the determination granting such Option or Stock Purchase Right, or such other date as is determined by the Administrator consistent with applicable legal requirements. Notice of the determination shall be given to each Service Provider to whom an Option or Stock Purchase Right is so granted within a reasonable time after the date of such grant.

15. **Amendment and Termination of the Plan.**

(a) **Amendment and Termination.** Subject to the requirements of subsection (c), the Board may at any time wholly or partially amend, alter, suspend, or terminate the Plan. However, without approval of the Company's stockholders given within twelve (12) months before or after the action by the Board, no action of the Board may, except as provided in Section 13 hereof, increase the limits imposed in Section 3 hereof on the maximum number of Shares which may be issued under the Plan or extend the term of the Plan under Section 7 hereof.

(b) **Stockholder Approval.** The Board shall obtain stockholder approval of any Plan amendment to the extent necessary and desirable to comply with Applicable Laws.

(c) **Effect of Amendment or Termination.** No amendment, alteration, suspension, or termination of the Plan or any Option or Stock Purchase Right shall impair the rights of any Holder, unless mutually agreed otherwise between the Holder and the Administrator, which agreement must be in writing and signed by the Holder and the Company. Termination of the Plan shall not affect the Administrator's ability to exercise the powers granted to it hereunder with respect to Options, Stock Purchase Rights, or Restricted Stock granted or awarded under the Plan prior to the date of such termination.

16. **Stockholder Approval.** The Plan will be submitted for the approval of the Company's stockholders within twelve (12) months after the date of the Board's initial adoption of the Plan. Options or Stock Purchase Rights may be granted prior to such stockholder approval, provided, that if such approval has not been obtained at the end of said twelve-month period, all Options and Stock Purchase Rights previously granted under the Plan shall thereupon be canceled and become null and void and any Shares issued upon exercise thereof shall immediately, and without further action on the part of the Company, be rescinded.

17. **Inability to Obtain Authority.** The inability of the Company to obtain authority from any regulatory body having jurisdiction, which authority is deemed by the Company's counsel to be necessary to the lawful issuance and sale of any Shares hereunder, shall relieve the Company of any liability in respect of the failure to issue or sell such Shares as to which such requisite authority shall not have been obtained.

18. **Reservation of Shares.** The Company, during the term of the Plan, shall at all times reserve and keep available such number of Shares as shall be sufficient to satisfy the requirements of the Plan.

19. **Repurchase Provisions.** The Administrator in its sole discretion may provide that the Company may repurchase Shares acquired upon exercise of an Option or Stock Purchase Right upon the occurrence of certain specified events, including, without limitation, a Holder's termination as a Service Provider, divorce, bankruptcy, or insolvency; provided, however, that any such repurchase right shall be set forth in the applicable Option Agreement or Restricted Stock Purchase Agreement or in another agreement referred to in such agreement.

20. **Rules Particular To Specific Countries.**

(a) **Generally.** To the extent required by the Company, each Holder agrees that he or she shall enter into an election with the Company or a Subsidiary (in a form approved by the Company) under which any Tax Liability (as defined below) including, but not limited to, National Insurance Contributions ("NICs") and any Fringe Benefit Tax ("FBT"), is transferred to and met by the Plan participant. For purposes of this Section 20, Tax Liability shall mean any and all liability under applicable non-U.S. laws, rules, or regulations, from any income tax, the Company's (or a Subsidiary's) NICs, FBT, or similar liability, and the Service Provider's NICs, FBT, or similar liability under applicable non-U.S. law that are attributable to: (A) the grant, vesting, or exercise of, or any other benefit derived by the Plan participant from an Option, Stock Purchase Right, or Restricted Stock; (B) the acquisition by the Plan participant of the Shares on exercise of an Option or the acquisition by the Plan participant of the Shares pursuant to a Stock Purchase Right; or (C) the disposal of any Shares acquired by the Plan participant pursuant to an Option or a Stock Purchase Right granted under the Plan.

(b) **Addendum.** Notwithstanding anything herein to the contrary, the terms and conditions of the Plan with respect to Service Providers who are tax residents of a particular country other than the United States may be subject to an addendum to the Plan in the form of an Appendix. To the extent that the terms and conditions set forth in an Appendix conflict with any provisions of the Plan, the provisions of the Appendix shall govern. The adoption of any such Appendix shall be pursuant to Section 15 above.

21. **Investment Intent.** The Company may require a Plan participant, as a condition of exercising or acquiring stock under any Option or Stock Purchase Right, (i) to give written assurances satisfactory to the Company as to the participant's knowledge and experience in financial and business matters and/or to employ a purchaser representative reasonably satisfactory to the Company who is knowledgeable and experienced in financial and business matters and that he or she is capable of evaluating, alone or together with the purchaser representative, the merits and risks of exercising the Option or Stock Purchase Right; and (ii) to give written assurances satisfactory to the Company stating that the participant is acquiring the stock subject to the Option or Stock Purchase Right for the participant's own account and not with any present intention of selling or otherwise distributing the stock. The foregoing requirements, and any assurances given pursuant to such requirements, shall be inoperative if (A) the issuance of the shares upon the exercise or acquisition of stock under the applicable Option or Stock Purchase Right has been registered under a then currently effective registration statement under the Securities Act or (B) as

to any particular requirement, a determination is made by counsel for the Company that such requirement need not be met in the circumstances under then applicable securities laws. The Company may, upon advice of counsel to the Company, place legends on stock certificates issued under the Plan as such counsel deems necessary or appropriate in order to comply with applicable securities laws, including, but not limited to, legends restricting the transfer of the stock.

22. **Section 409A.** To the extent that the Administrator determines that any Option, Stock Purchase Right, or Restricted Stock granted or awarded under the Plan is subject to Section 409A of the Code, the agreement evidencing such Option, Stock Purchase Right, or Restricted Stock shall incorporate the terms and conditions required by Section 409A of the Code. To the extent applicable, the Plan and the agreement evidencing such option, Stock Purchase Right, or Restricted Stock shall be interpreted in accordance with Section 409A of the Code and the Department of Treasury regulations and other interpretive guidance issued thereunder. Notwithstanding any provision of the Plan to the contrary, in the event that the Administrator determines that any Option, Stock Purchase Right, or Restricted Stock may be subject to Section 409A of the Code and related Department of Treasury regulations and other interpretive guidance issued thereunder, the Administrator may adopt such amendments to the Plan and the applicable agreement or adopt other policies and procedures (including amendments, policies, and procedures with retroactive effect), or take any other actions, that the Administrator determines are necessary or appropriate to (a) exempt the Option, Stock Purchase Right, or Restricted Stock from Section 409A of the Code and/or preserve the intended tax treatment of the benefits provided with respect to the Option, Stock Purchase Right, or Restricted Stock, or (b) comply with the requirements of Section 409A of the Code and related Department of Treasury regulations and other interpretive guidance thereunder and thereby avoid the application of any penalty taxes under such Section.

23. **Governing Law.** This Plan shall be governed by and construed in accordance with the laws of the State of Delaware excluding that body of law pertaining to conflicts of law.

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**AMENDMENT TO
THE 2015 EQUITY INCENTIVE PLAN OF
GRITSTONE ONCOLOGY, INC.**

September 1, 2017

Pursuant to the authority reserved to the Board of Directors (the "Board") of Gritstone Oncology, Inc., a corporation organized under the laws of State of Delaware (the "Company"), under Section 15 of the Company's 2015 Equity Incentive Plan, as amended (the "Plan"), the Board hereby amends the Plan as follows:

1. Section 3 of the Plan is hereby amended to read in its entirety as follows:

3. Stock Subject to the Plan. Subject to the provisions of Section 13 hereof, the shares of stock subject to Options or Stock Purchase Rights shall be Common Stock. Subject to the provisions of Section 13 hereof, the maximum aggregate number of Shares which may be issued upon exercise of such Options or Stock Purchase Rights is 20,833,332 (the "Total Authorized Shares"). Shares issued upon exercise of Options or Stock Purchase Rights may be authorized but unissued, or reacquired Common Stock. If an Option or Stock Purchase Right expires or becomes unexercisable without having been exercised in full, the unpurchased Shares which were subject thereto shall become available for future grant or sale under the Plan (unless the Plan has terminated). Shares which are delivered by the Holder or withheld by the Company upon the exercise of an Option or Stock Purchase Right under the Plan, in payment of the exercise price thereof or tax withholding thereon, may again be optioned, granted, or awarded hereunder, subject to the limitations of this Section 3. If Shares of Restricted Stock are repurchased by the Company at their original purchase price, such Shares shall become available for future grant under the Plan (unless the Plan has terminated). Notwithstanding the provisions of this Section 3, no Shares may again be optioned, granted, or awarded if such action would cause an Incentive Stock Option to fail to qualify as an Incentive Stock Option under Code Section 422.

GRITSTONE ONCOLOGY, INC.

2015 EQUITY INCENTIVE PLAN

STOCK OPTION GRANT NOTICE

Pursuant to its 2015 Equity Incentive Plan, as amended from time to time (the “Plan”), Gritstone Oncology, Inc., a Delaware corporation (the “Company”), hereby grants to the individual listed below (the “Optionee”), an option to purchase the number of shares of the Company’s Common Stock set forth below (the “Option”), subject to the terms and conditions set forth herein, in the Plan, and in the certain Stock Option Agreement attached hereto as Exhibit A (the “Option Agreement”), each of which is incorporated herein by reference. Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Stock Option Grant Notice (the “Grant Notice”) and the Option Agreement.

NOTICE OF STOCK OPTION GRANT

Optionee: _____

Date of Option Agreement: _____

Date of Grant: _____

Vesting Start Date: _____

Exercise Price per Share: _____

Total Number of Shares Granted: _____

Total Exercise Price: _____

Term/Expiration Date: _____

Type of Option: Incentive Stock Option Non-Qualified Stock Option

Vesting Schedule: The Shares subject to this Option shall vest according to the following schedule:
 Twenty-five percent (25%) of the Shares subject to the Option (rounded down to the next whole number of shares) shall vest on the first anniversary of the Vesting Start Date and 1/48th of the Shares subject to the Option shall vest on each monthly anniversary of the Vesting Start Date thereafter so that one hundred percent (100%) of the Shares subject to the Option are vested on the fourth anniversary of the Vesting Start Date, subject to Optionee remaining a Service Provider through each such vesting date (unless otherwise determined by the Administrator, in its sole discretion).

By his or her signature below, Optionee agrees to be bound by the terms and conditions of the Plan, the Option Agreement, and this Grant Notice. Optionee has reviewed the Plan, the Option Agreement, and this Grant Notice in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice, and fully understands the provisions of this Grant Notice, the Option Agreement, and the Plan. Optionee hereby agrees to accept as binding, conclusive, and final all decisions or interpretations of the Administrator of the Plan upon any questions arising under the Plan, the Option Agreement, and this Grant Notice.

GRITSTONE ONCOLOGY, INC.:

OPTIONEE:

By: _____
Name: _____
Title: _____
Address: 3009 Webster Street
San Francisco, CA 94123

By: _____
Name: _____
Address: _____

**SIGNATURE PAGE TO GRITSTONE ONCOLOGY, INC.
STOCK OPTION GRANT NOTICE**

EXHIBIT A

STOCK OPTION AGREEMENT

Pursuant to the Stock Option Grant Notice (the "Grant Notice") to which this Stock Option Agreement (the "Agreement") is attached, Gritstone Oncology, Inc., a Delaware corporation (the "Company"), has granted to Optionee (as set forth in the Grant Notice) an option to purchase the number of Shares (as defined in the Grant Notice) under the Gritstone Oncology, Inc. 2015 Equity Incentive Plan (the "Plan") indicated in the Grant Notice at the exercise price per share set forth in the Grant Notice (the "Exercise Price").

1. **Plan Incorporated By Reference.** Notwithstanding anything to the contrary anywhere else in this Option Agreement, this grant of an Option is subject to the terms, definitions, and provisions of the Plan, which is incorporated herein by reference.

If designated in the Grant Notice as an Incentive Stock Option, this Option is intended to qualify as an Incentive Stock Option as defined in Section 422 of the Code; provided, however, that to the extent that the aggregate Fair Market Value of the Common Stock with respect to which Incentive Stock Options (within the meaning of Code Section 422, but without regard to Code Section 422(d)), including the Option, are exercisable for the first time by Optionee during any calendar year (under the Plan and all other incentive stock option plans of the Company (or any "parent corporation" or "subsidiary corporation" thereof within the meaning of Code Sections 424(e) or 424(f), respectively)) exceeds one hundred thousand dollars (\$100,000), such options shall be treated as not qualifying under Code Section 422, but rather shall be treated as Non-Qualified Stock Options to the extent required by Code Section 422. The rule set forth in the preceding sentence shall be applied by taking options into account in the order in which they were granted. For purposes of these rules, the Fair Market Value of the Common Stock shall be determined as of the time the option with respect to such stock is granted.

2. **Exercise of Option.** This Option is exercisable as follows:

(a) **Right to Exercise.**

(i) This Option shall be exercisable cumulatively according to the vesting schedule set out in the Grant Notice. For purposes of this Option Agreement, Shares subject to this Option shall vest based on Optionee's continued status as a Service Provider, unless otherwise determined by the Administrator.

(ii) This Option may not be exercised for a fraction of a Share.

(iii) In the event of Optionee's death, Disability, or other termination of Optionee's status as a Service Provider, the exercisability of the Option shall be governed by Sections 7, 8, 9, and 10 hereof, subject to the limitations in this Section 2.

(iv) In the event the exercise of the Option following the termination of Optionee's status as a Service Provider would be prohibited at any time solely because the issuance of shares would violate the registration requirements under the Securities Act of 1933, as amended (the "Securities Act"), then the Option shall terminate on the earlier of (i) the Term/Expiration Date of the Option as set forth in the Grant Notice or (ii) the expiration of a period of three (3) months after the termination of Optionee's status as a Service Provider during which the exercise of the Option would not be in violation of such registration requirements.

(v) In no event may this Option be exercised after the Term/Expiration Date of this Option as set forth in the Grant Notice.

(b) Method of Exercise. This Option shall be exercisable by written notice to the Company in the form attached hereto as Exhibit B (the "Exercise Notice"). The Exercise Notice shall state the number of Shares for which the Option is being exercised, and such other representations and agreements with respect to such Shares of Common Stock as may be required by the Company pursuant to the provisions of the Plan. The Exercise Notice shall be signed by Optionee and shall be delivered in person or by certified mail to the Secretary of the Company or such other authorized representative of the Company. The Exercise Notice shall be accompanied by payment of the Exercise Price, including payment of any applicable withholding tax.

No Shares shall be issued pursuant to the exercise of an Option unless such issuance and such exercise comply with all relevant provisions of law and the requirements of any stock exchange upon which the Shares may then be listed. Assuming such compliance, for income tax purposes the Shares shall be considered transferred to Optionee on the date on which the Option is exercised with respect to such Shares.

3. Optionee's Representations. If the Shares purchasable pursuant to the exercise of this Option have not been registered under the Securities Act, at the time this Option is exercised, Optionee shall, if required by the Company, concurrently with the exercise of all or any portion of this Option, deliver to the Company his or her Investment Representation Statement in the form attached hereto as Exhibit C.

4. Lock-Up Period. Optionee hereby agrees that if so requested by the Company or any representative of the underwriters (the "Managing Underwriter") in connection with any registration of the offering of any securities of the Company under the Securities Act, Optionee shall not sell or otherwise transfer any Shares or other securities of the Company during the 180-day period (or such longer period as may be requested in writing by the Managing Underwriter and agreed to in writing by the Company) following the effective date of a registration statement of the Company filed under the Securities Act (the "Market Standoff Period"); provided, however, that such restriction shall apply only to the first registration statement of the Company to become effective under the Securities Act that includes securities to be sold on behalf of the Company to the public in an underwritten public offering under the Securities Act. The Company may impose stop-transfer instructions with respect to securities subject to the foregoing restrictions until the end of such Market Standoff Period, and these restrictions shall be binding on any transferee of such Shares. Notwithstanding the foregoing, the 180-day period may be extended for up to such number of additional days as is deemed necessary by the Company or the Managing Underwriter to continue coverage by research analysts in accordance with NASD Rule 2711 or any successor rule.

5. **Method of Payment.** Payment of the Exercise Price shall be by any of the following at the election of Optionee:

(a) cash;

(b) check;

(c) with the consent of the Administrator, a full recourse promissory note bearing interest (at no less than such rate as is a market rate of interest and which then precludes the imputation of interest under the Code), payable upon such terms as may be prescribed by the Administrator and structured to comply with Applicable Laws;

(d) with the consent of the Administrator, surrender of other Shares of Common Stock of the Company which have a Fair Market Value on the date of surrender equal to the Exercise Price of the Shares as to which the Option is being exercised;

(e) with the consent of the Administrator, surrendered Shares issuable upon the exercise of the Option having a Fair Market Value on the date of exercise equal to the aggregate Exercise Price of the Option or exercised portion thereof;

(f) with the consent of the Administrator, property of any kind which constitutes good and valuable consideration;

(g) following the Public Trading Date, with the consent of the Administrator, delivery of a notice that Optionee has placed a market sell order with a broker with respect to Shares then issuable upon exercise of the Option and that the broker has been directed to pay a sufficient portion of the net proceeds of the sale to the Company in satisfaction of the aggregate Exercise Price; provided, that payment of such proceeds is then made to the Company upon settlement of such sale; or

(h) with the consent of the Administrator, any combination of the foregoing methods of payment.

6. **Restrictions on Exercise.** This Option may not be exercised until the Plan has been approved by the stockholders of the Company. If the issuance of Shares upon such exercise or if the method of payment for such Shares would constitute a violation of any applicable federal or state securities or other law or regulation, then the Option may also not be exercised. The Company may require Optionee to make any representation and warranty to the Company as may be required by any applicable law or regulation before allowing the Option to be exercised.

7. **Termination of Relationship.** If Optionee ceases to be a Service Provider (other than by reason of Optionee's death or Disability), Optionee may exercise this Option during the three (3) month period immediately following the date Optionee ceases to be a Service Provider to the extent the Option was vested on such date (and in no event later than the expiration date of the term of this Option as set forth in the Grant Notice). To the extent that Optionee does not exercise this Option within the time specified herein, the Option shall terminate.

8. **Disability of Optionee.** If Optionee ceases to be a Service Provider as a result of his or her Disability, Optionee may exercise the Option to the extent the Option is vested on the date of exercise, but only within twelve (12) months from the date Optionee ceases to be a Service Provider (and in no event later than the expiration date of the term of this Option as set forth in the Grant Notice). To the extent that Optionee does not exercise this Option within the time specified herein, the Option shall terminate.

9. **Death of Optionee.** If Optionee ceases to be a Service Provider as a result of the death of Optionee, the vested portion of the Option may be exercised at any time within twelve (12) months following the date of death (and in no event later than the expiration date of the term of this Option as set forth in the Grant Notice) by Optionee's estate or by a person who acquires the right to exercise the Option by bequest or inheritance. To the extent that the Option is not exercised within the time specified herein, the Option shall terminate.

10. **Early Termination of Option.** Notwithstanding anything herein to the contrary, the Administrator may determine in its sole discretion that the Option is terminated as of the date Optionee ceases to be a Service Provider for any reason with regard to any portion of the Option that is not vested as of such date.

11. **Non-Transferability of Option.** This Option may not be transferred in any manner except by will or by the laws of descent or distribution. It may be exercised during the lifetime of Optionee only by Optionee. The terms of this Option shall be binding upon the executors, administrators, heirs, successors, and assigns of Optionee.

12. **Term of Option.** This Option may be exercised only within the term set out in the Grant Notice.

13. **Restrictions on Shares.** Optionee hereby agrees that Shares purchased upon the exercise of the Option shall be subject to such terms and conditions as the Administrator shall determine in its sole discretion, including, without limitation, restrictions on the transferability of Shares, and a right of first refusal in favor of the Company with respect to permitted transfers of Shares. Such terms and conditions may, in the Administrator's sole discretion, be contained in the Exercise Notice with respect to the Option or in such other agreement as the Administrator shall determine and which Optionee hereby agrees to enter into at the request of the Company.

14. **Rules Particular To Specific Countries.**

(a) **Generally.** Optionee shall, if required by the Administrator, enter into an election with the Company or a Subsidiary (in a form approved by the Company) under which any liability to the Company's (or a Subsidiary's) Tax Liability, including, but not limited to, National Insurance Contributions ("**NICs**") and the Fringe Benefit Tax ("**FBT**"), is transferred to and met by Optionee. For purposes of this Section 14, Tax Liability shall mean any and all liability under applicable non-U.S. laws, rules, or regulations from any income tax, the Company's (or a Subsidiary's) NICs, FBT, or similar liability under non-U.S. laws, and Optionee's NICs, FBT, or similar liability that are attributable to: (A) the grant or exercise of, or any other benefit derived by Optionee from the Option; (B) the acquisition by Optionee of the Shares on exercise of the Option; or (C) the disposal of any Shares acquired upon exercise of the Option.

(b) **Tax Indemnity.** Optionee shall indemnify and keep indemnified the Company and any of its Subsidiaries from and against any Tax Liability.

15. **Not a Contract or Guarantee of Employment**. Subject to applicable law, nothing in this Option Agreement, in the Grant Notice or in the Plan shall confer upon Optionee any right to continue to serve as a Service Provider, nor shall it interfere in any way with the Company's right to terminate Optionee's Service Provider relationship at any time, with or without cause and with or without prior notice.

16. **Optionee Knowingly Agrees**. Optionee represents that he or she has read this Agreement and is familiar with its terms and provisions. Optionee hereby agrees to accept as binding, conclusive, and final all decisions or interpretations of the Board or other administrator of the Plan upon any questions arising under this Agreement.

* * * * *

EXHIBIT B

GRITSTONE ONCOLOGY, INC.

2015 EQUITY INCENTIVE PLAN

EXERCISE NOTICE

Gritstone Oncology, Inc.
Attention: Stock Administration

1. **Exercise of Option.** Effective as of today, _____, the undersigned (the "Optionee") hereby elects to exercise Optionee's option to purchase _____ shares of the Common Stock (the "Shares") of Gritstone Oncology, Inc., a Delaware corporation (the "Company"), under and pursuant to the Gritstone Oncology, Inc. 2015 Equity Incentive Plan, as amended from time to time (the "Plan"), and the Stock Option Grant Notice and Stock Option Agreement, dated _____ (the "Option Agreement"). Capitalized terms used herein without definition shall have the meanings given in the Option Agreement.

Date of Grant: _____

Number of Shares as to which Option is Exercised: _____

Exercise Price per Share: \$ _____

Total Exercise Price: \$ _____

Certificate to be issued in name of: _____

Cash Payment delivered herewith: \$ _____

Other form of consideration delivered herewith (only if approved by the Administrator): Form of Consideration: \$ _____

Type of Option: Incentive Stock Option Non-Qualified Stock Option

2. **Representations of Optionee.** Optionee acknowledges that Optionee has received, read, and understood the Plan and the Option Agreement. Optionee agrees to abide by and be bound by their terms and conditions.

3. **Rights as Stockholder.** Until the stock certificate evidencing Shares purchased pursuant to the exercise of the Option is issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to Shares subject to the Option, notwithstanding the exercise of the Option. The Company shall issue (or cause to be issued) such stock certificate promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the stock certificate is issued, except as provided in Section 13 of the Plan.

Optionee shall enjoy rights as a stockholder until such time as Optionee disposes of the Shares or the Company and/or its assignee(s) exercises the Right of First Refusal (as defined below) hereunder. Upon such exercise, Optionee shall have no further rights as a holder of the Shares so purchased except the right to receive payment for the Shares so purchased in accordance with the provisions of this Agreement, and Optionee shall forthwith cause the certificate(s) evidencing the Shares so purchased to be surrendered to the Company for transfer or cancellation.

4. Optionee's Rights to Transfer Shares.

(a) Company's Right of First Refusal. Before any Shares held by Optionee or any permitted transferee (each, a "Holder") may be sold, pledged, assigned, hypothecated, transferred, or otherwise disposed of (each, a "Transfer"), the Company or its assignee(s) shall have a right of first refusal to purchase the Shares proposed to be Transferred on the terms and conditions set forth in this Section 4 (the "Right of First Refusal").

(i) Notice of Proposed Transfer. In the event any Holder desires to Transfer any Shares, the Holder shall deliver to the Company a written notice (the "Notice") stating: (w) the Holder's bona fide intention to sell or otherwise Transfer such Shares; (x) the name of each proposed purchaser or other transferee (the "Proposed Transferee"); (y) the number of Shares to be Transferred to each Proposed Transferee; and (z) the bona fide cash price or other consideration for which the Holder proposes to Transfer the Shares (the "Offered Price"), and the Holder shall offer such Shares at the Offered Price to the Company or its assignee(s).

(ii) Exercise of Right of First Refusal. Within thirty (30) days after receipt of the Notice, the Company and/or its assignee(s) may elect in writing to purchase all, but not less than all, of the Shares proposed to be Transferred to any one or more of the Proposed Transferees. The purchase price shall be determined in accordance with Section 4(a)(iii) hereof.

(iii) Purchase Price. The purchase price ("Purchase Price") for the Shares repurchased under this Section 4 shall be the Offered Price. If the Offered Price includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the Board in good faith.

(iv) Payment. Payment of the Purchase Price shall be made, at the option of the Company or its assignee(s), in cash (by check), by cancellation of all or a portion of any outstanding indebtedness of the Holder to the Company (or, in the case of repurchase by an assignee, to the assignee), or by any combination thereof within thirty (30) days after receipt of the Notice or in the manner and at the times mutually agreed to by the Company and the Holder.

(v) Holder's Right to Transfer. If all of the Shares proposed to be Transferred in the Notice are not purchased by the Company and/or its assignee(s) as provided in this Section 4, then the Holder may sell or otherwise Transfer such Shares to that Proposed Transferee at the Offered Price or at a higher price, provided that such sale or other Transfer is consummated within one hundred twenty (120) days after the date of the Notice and provided further that any such sale or other Transfer is effected in accordance with any applicable securities laws and the Proposed Transferee agrees in writing that the provisions of this Section 4 shall continue to apply to the Shares in the hands of such Proposed Transferee. If the Shares described

in the Notice are not Transferred to the Proposed Transferee within such 120-day period, a new Notice shall be given to the Company, and the Company and/or its assignees shall again be offered the Right of First Refusal as provided herein before any Shares held by the Holder may be sold or otherwise Transferred.

(b) **Exception for Certain Family Transfers.** Anything to the contrary contained in this Section 4 notwithstanding, the Transfer of any or all of the Shares during Optionee's lifetime or upon Optionee's death by will or intestacy to Optionee's Immediate Family or a trust for the benefit of Optionee's Immediate Family shall be exempt from the Right of First Refusal. As used herein, "**Immediate Family**" shall mean spouse, lineal descendant or antecedent, father, mother, brother or sister, or stepchild (whether or not adopted). In such case, the transferee or other recipient shall receive and hold the Shares so Transferred subject to the provisions of this Section 4 (including the Right of First Refusal) and there shall be no further Transfer of such Shares except in accordance with the terms of this Section 4.

(c) **Termination of Right of First Refusal.** The Right of First Refusal shall terminate as to all Shares upon a sale of Common Stock of the Company to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act of 1933, as amended (a "**Public Offering**").

5. **Transfer Restrictions.** Any transfer or sale of the Shares is subject to restrictions on transfer imposed by any applicable state and federal securities laws. Any Transfer or attempted Transfer of any of the Shares not in accordance with the terms of this Agreement, including the Right of First Refusal provided in this Agreement, shall be void and the Company may enforce the terms of this Agreement by stop-transfer instructions or similar actions by the Company and its agents or designees.

6. **Tax Consultation.** Optionee understands that Optionee may suffer adverse tax consequences as a result of Optionee's purchase or disposition of the Shares. Optionee represents that Optionee has consulted with any tax consultants Optionee deems advisable in connection with the purchase or disposition of the Shares and that Optionee is not relying on the Company for any tax advice.

7. Restrictive Legends and Stop-Transfer Orders.

(a) **Legends.** Optionee understands and agrees that the Company shall cause the legends set forth below or legends substantially equivalent thereto, to be placed upon any certificate(s) evidencing ownership of the Shares together with any other legends that may be required by state or federal securities laws:

THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO, OR IN CONNECTION WITH, THE SALE OR DISTRIBUTION THEREOF. NO SUCH SALE OR DISPOSITION MAY BE EFFECTED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL SATISFACTORY TO THE CORPORATION THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933, AS AMENDED.

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER AND RIGHT OF FIRST REFUSAL OPTIONS HELD BY THE ISSUER OR ITS ASSIGNEE(S) AS SET FORTH IN THE EXERCISE NOTICE BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SHARES, A COPY OF WHICH MAY BE OBTAINED AT THE PRINCIPAL OFFICE OF THE ISSUER. SUCH TRANSFER RESTRICTIONS AND RIGHT OF FIRST REFUSAL ARE BINDING ON TRANSFEREES OF THESE SHARES.

(b) Stop-Transfer Notices. Optionee agrees that, in order to ensure compliance with the restrictions referred to herein, the Company may issue appropriate "stop-transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

(c) Refusal to Transfer. The Company shall not be required (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Agreement or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such Shares shall have been so transferred.

8. Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, this Agreement shall be binding upon Optionee and his or her heirs, executors, administrators, successors, and assigns.

9. Interpretation. Any dispute regarding the interpretation of this Agreement shall be submitted by Optionee or by the Company forthwith to the Company's Board of Directors or committee thereof that is responsible for the administration of the Plan (the "Administrator"), which shall review such dispute at its next regular meeting. The resolution of such a dispute by the Administrator shall be final and binding on the Company and on Optionee.

10. Governing Law; Severability. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware excluding that body of law pertaining to conflicts of law. Should any provision of this Agreement be determined by a court of law to be illegal or unenforceable, the other provisions shall nevertheless remain effective and shall remain enforceable.

11. Notices. Any notice required or permitted hereunder shall be given in writing and shall be deemed effectively given upon personal delivery or upon deposit in the United States mail by certified mail, with postage and fees prepaid, addressed to the other party at its address as shown below beneath its signature, or to such other address as such party may designate in writing from time to time to the other party.

12. **Further Instruments.** Optionee hereby agrees to execute such further instruments and to take such further action as may be reasonably necessary to carry out the purposes and intent of this Agreement including, without limitation, the Investment Representation Statement in the form attached hereto as Exhibit C.

13. **Delivery of Payment.** Optionee herewith delivers to the Company the full Exercise Price for the Shares, as well as any applicable withholding tax.

14. **Entire Agreement.** The Plan and Option Agreement are incorporated herein by reference. This Agreement, the Plan, the Option Agreement, and the Investment Representation Statement constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Optionee with respect to the subject matter hereof.

Accepted by:

Gritstone Oncology, Inc.:

By: _____
Name: _____
Title: _____
Address: _____

Submitted by:

OPTIONEE:

By: _____
Name: _____
Address: _____

**SIGNATURE PAGE TO GRITSTONE ONCOLOGY, INC.
EXERCISE NOTICE**

EXHIBIT C

INVESTMENT REPRESENTATION STATEMENT

OPTIONEE : _____
COMPANY : Gritstone Oncology, Inc.
SECURITY : Common Stock
AMOUNT : _____
DATE : _____

In connection with the purchase of the above-listed shares of Common Stock (the "Securities") of Gritstone Oncology, Inc., a Delaware corporation (the "Company"), the undersigned (the "Optionee") represents to the Company the following:

1. Optionee is aware of the Company's business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. Optionee is acquiring these Securities for investment for Optionee's own account only and not with a view to, or for resale in connection with, any "distribution" thereof within the meaning of the Securities Act of 1933, as amended (the "Securities Act").

2. Optionee acknowledges and understands that the Securities constitute "restricted securities" under the Securities Act and have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Optionee's investment intent as expressed herein. Optionee understands that, in the view of the Securities and Exchange Commission, the statutory basis for such exemption may be unavailable if Optionee's representation was predicated solely upon a present intention to hold these Securities for the minimum capital gains period specified under tax statutes, for a deferred sale, for or until an increase or decrease in the market price of the Securities, or for a period of one (1) year or any other fixed period in the future. Optionee further understands that the Securities must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. Optionee further acknowledges and understands that the Company is under no obligation to register the Securities. Optionee understands that the certificate evidencing the Securities will be imprinted with a legend which prohibits the transfer of the Securities unless they are registered or such registration is not required in the opinion of counsel satisfactory to the Company and any other legend required under applicable securities laws or agreements.

3. Optionee is familiar with the provisions of Rule 701 and Rule 144, each promulgated under the Securities Act, which, in substance, permit limited public resale of "restricted securities" acquired, directly or indirectly, from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions. Rule 701 provides that if the issuer

qualifies under Rule 701 at the time of the grant of the Option to Optionee, the exercise will be exempt from registration under the Securities Act. In the event the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), ninety (90) days thereafter (or such longer period as any market stand-off agreement may require) the Securities exempt under Rule 701 may under present law be resold, subject to the satisfaction of certain of the conditions specified by Rule 144, including: (1) the resale being made through a broker in an unsolicited "broker's transaction" or in transactions directly with a market maker (as this term is defined under the Exchange Act); and, in the case of an affiliate, (2) the availability of certain public information about the Company, (3) the amount of Securities being sold during any three (3) month period not exceeding the limitations specified in Rule 144(e), and (4) the timely filing of a Form 144, if applicable.

In the event that the Company does not qualify under Rule 701 at the time of grant of the Option to Optionee, then the Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which requires the resale to occur not less than six (6) months, or, in the event the Company is not subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act, not less than one (1) year, after the later of the date the Securities were sold by the Company or the date the Securities were sold by an affiliate of the Company, within the meaning of Rule 144; and, in the case of acquisition of the Securities by an affiliate, the satisfaction of the conditions set forth in Sections 1, 2, 3, and 4 of the paragraph immediately above or, in the case of a non-affiliate who subsequently holds the Securities less than one year, the satisfaction of the conditions set forth in Section 2 of the paragraph immediately above.

4. Optionee further understands that in the event all of the applicable requirements of Rule 701 or 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required; and that, notwithstanding the fact that Rules 701 and 144 are not exclusive, the Staff of the Securities and Exchange Commission has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rules 701 or 144 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk. Optionee understands that no assurances can be given that any such other registration exemption will be available in such event.

Signature of Optionee:

Date: _____

**SIGNATURE PAGE TO GRITSTONE ONCOLOGY, INC.
INVESTMENT REPRESENTATION STATEMENT**

**GRITSTONE ONCOLOGY, INC.
2015 EQUITY INCENTIVE PLAN
STOCK OPTION GRANT NOTICE
Early Exercise Permitted**

Pursuant to its 2015 Equity Incentive Plan, as amended from time to time (the “Plan”), Gritstone Oncology, Inc., a Delaware corporation (the “Company”), hereby grants to the individual listed below (the “Optionee”), an option to purchase the number of shares of the Company’s Common Stock set forth below (the “Option”), subject to the terms and conditions set forth herein, in the Plan, and in the certain Stock Option Agreement attached hereto as Exhibit A (the “Option Agreement”), each of which is incorporated herein by reference. Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Stock Option Grant Notice (the “Grant Notice”) and the Option Agreement.

NOTICE OF STOCK OPTION GRANT

Optionee:	_____
Date of Option Agreement:	_____
Date of Grant:	_____
Vesting Start Date:	_____
Exercise Price per Share:	_____
Total Number of Shares Granted:	_____
Total Exercise Price:	_____
Term/Expiration Date:	_____

Type of Option: Non-Qualified Stock Option

Exercise Schedule: Same as Vesting Schedule Early Exercise Permitted

Vesting Schedule: This Option is exercisable immediately, in whole or in part, at such times as are established by the Administrator, conditioned upon Optionee entering into a Restricted Stock Purchase Agreement with respect to any unvested Shares. The Shares subject to this Option shall vest and/or be released from the Company’s Repurchase Option, as set forth in the Restricted Stock Purchase Agreement attached hereto as Exhibit D, according to the following schedule:

Twenty-five percent (25%) of the Shares subject to the Option (rounded down to the next whole number of shares) shall vest on the first anniversary of the Vesting Start Date and 1/48th of the Shares subject to the Option shall vest on each monthly anniversary of the Vesting Start Date thereafter so that one hundred percent (100%) of the Shares subject to the Option are vested on the fourth anniversary of the Vesting Start Date, subject to Optionee remaining a Service Provider through each such vesting date (unless otherwise determined by the Administrator, in its sole discretion).

Termination Period:

This Option may be exercised, to the extent vested, for three (3) months after Optionee ceases to be a Service Provider, or such longer period as may be applicable upon the death or Disability of Optionee as provided herein (or, if not provided herein, then as provided in the Plan), but in no event later than the Term/Expiration Date as set forth above.

By his or her signature and the Company's signature below, Optionee agrees to be bound by the terms and conditions of the Plan, the Option Agreement, and this Grant Notice. Optionee has reviewed the Plan, the Option Agreement, and this Grant Notice in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice, and fully understands the provisions of this Grant Notice, the Option Agreement, and the Plan. Optionee hereby agrees to accept as binding, conclusive, and final all decisions or interpretations of the Administrator of the Plan upon any questions arising under the Plan, the Option Agreement, and this Grant Notice.

GRITSTONE ONCOLOGY, INC.:

OPTIONEE:

By: _____
Name: _____
Title: _____
Address: _____

By: _____
Name: _____
Address: _____

**SIGNATURE PAGE TO GRITSTONE ONCOLOGY, INC.
STOCK OPTION GRANT NOTICE**

EXHIBIT A

STOCK OPTION AGREEMENT

Pursuant to the Stock Option Grant Notice (the "Grant Notice") to which this Stock Option Agreement (the "Agreement") is attached, Gritstone Oncology, Inc., a Delaware corporation (the "Company"), has granted to Optionee (as set forth in the Grant Notice) an option to purchase the number of Shares (as defined in the Grant Notice) under the Gritstone Oncology, Inc. 2015 Equity Incentive Plan (the "Plan") indicated in the Grant Notice at the exercise price per share set forth in the Grant Notice (the "Exercise Price").

1. **Plan Incorporated By Reference.** Notwithstanding anything to the contrary anywhere else in this Option Agreement, this grant of an Option is subject to the terms, definitions, and provisions of the Plan, which is incorporated herein by reference.

2. **Exercise of Option.** This Option is exercisable as follows:

(a) Right to Exercise.

(i) This Option shall be exercisable cumulatively according to the vesting schedule set out in the Grant Notice. Alternatively, at the election of Optionee, and as provided herein, this Option may be exercised in whole or in part at such times as are established by the Administrator as to Shares which have not yet vested. For purposes of this Option Agreement, Shares subject to this Option shall vest based on Optionee's continued status as a Service Provider, unless otherwise determined by the Administrator. Vested Shares shall not be subject to the Company's Repurchase Option (as set forth in the Restricted Stock Purchase Agreement).

(ii) As a condition to exercising this Option for unvested Shares, Optionee shall execute the Restricted Stock Purchase Agreement.

(iii) This Option may not be exercised for a fraction of a Share.

(iv) In the event of Optionee's death, Disability, or other termination of Optionee's status as a Service Provider, the exercisability of the Option shall be governed by Sections 7, 8, 9, and 10 hereof, subject to the limitations contained in this Section 2.

(v) In the event the exercise of the Option following the termination of Optionee's status as a Service Provider would be prohibited at any time solely because the issuance of shares would violate the registration requirements under the Securities Act of 1933, as amended (the "Securities Act"), then the Option shall terminate on the earlier of (i) the Term/Expiration Date of the Option as set forth in the Grant Notice or (ii) the expiration of a period of three (3) months after the termination of Optionee's status as a Service Provider during which the exercise of the Option would not be in violation of such registration requirements.

(vi) In no event may this Option be exercised after the Term/Expiration Date of this Option as set forth in the Grant Notice.

(b) **Method of Exercise.** This Option shall be exercisable by written notice to the Company in the form attached hereto as Exhibit B (the “Exercise Notice”). The Exercise Notice shall state the number of Shares for which the Option is being exercised, and such other representations and agreements with respect to such Shares of Common Stock as may be required by the Company pursuant to the provisions of the Plan. The Exercise Notice shall be signed by Optionee and, together with an executed copy of the Restricted Stock Purchase Agreement, if applicable, shall be delivered in person or by certified mail to the Secretary of the Company or such other authorized representative of the Company. The Exercise Notice and Restricted Stock Purchase Agreement shall be accompanied by payment of the Exercise Price, including payment of any applicable withholding tax.

No Shares shall be issued pursuant to the exercise of an Option unless such issuance and such exercise comply with all relevant provisions of law and the requirements of any stock exchange upon which the Shares may then be listed. Assuming such compliance, for income tax purposes the Shares shall be considered transferred to Optionee on the date on which the Option is exercised with respect to such Shares.

3. **Optionee’s Representations.** If the Shares purchasable pursuant to the exercise of this Option have not been registered under the Securities Act, at the time this Option is exercised, Optionee shall, if required by the Company, concurrently with the exercise of all or any portion of this Option, deliver to the Company his or her Investment Representation Statement in the form attached hereto as Exhibit C.

4. **Lock-Up Period.** Optionee hereby agrees that if so requested by the Company or any representative of the underwriters (the “Managing Underwriter”) in connection with any registration of the offering of any securities of the Company under the Securities Act, Optionee shall not sell or otherwise transfer any Shares or other securities of the Company during the 180-day period (or such longer period as may be requested in writing by the Managing Underwriter and agreed to in writing by the Company) following the effective date of a registration statement of the Company filed under the Securities Act (the “Market Standoff Period”); provided, however, that such restriction shall apply only to the first registration statement of the Company to become effective under the Securities Act that includes securities to be sold on behalf of the Company to the public in an underwritten public offering under the Securities Act. The Company may impose stop-transfer instructions with respect to securities subject to the foregoing restrictions until the end of such Market Standoff Period, and these restrictions shall be binding on any transferee of such Shares. Notwithstanding the foregoing, the 180-day period may be extended for up to such number of additional days as is deemed necessary by the Company or the Managing Underwriter to continue coverage by research analysts in accordance with NASD Rule 2711 or any successor rule.

5. **Method of Payment.** Payment of the Exercise Price shall be by any of the following at the election of Optionee:

- (a) cash;
- (b) check;

(c) with the consent of the Administrator, a full recourse promissory note bearing interest (at no less than such rate as is a market rate of interest and which then precludes the imputation of interest under the Code), payable upon such terms as may be prescribed by the Administrator and structured to comply with Applicable Laws;

(d) with the consent of the Administrator, surrender of other Shares of Common Stock of the Company which have a Fair Market Value on the date of surrender equal to the Exercise Price of the Shares as to which the Option is being exercised;

(e) with the consent of the Administrator, surrendered Shares issuable upon the exercise of the Option having a Fair Market Value on the date of exercise equal to the aggregate Exercise Price of the Option or exercised portion thereof;

(f) with the consent of the Administrator, property of any kind which constitutes good and valuable consideration;

(g) following the Public Trading Date, with the consent of the Administrator, delivery of a notice that Optionee has placed a market sell order with a broker with respect to Shares then issuable upon exercise of the Option and that the broker has been directed to pay a sufficient portion of the net proceeds of the sale to the Company in satisfaction of the aggregate Exercise Price; provided, that payment of such proceeds is then made to the Company upon settlement of such sale; or

(h) with the consent of the Administrator, any combination of the foregoing methods of payment.

6. **Restrictions on Exercise.** This Option may not be exercised until the Plan has been approved by the stockholders of the Company. If the issuance of Shares upon such exercise or if the method of payment for such Shares would constitute a violation of any applicable federal or state securities or other law or regulation, then the Option may also not be exercised. The Company may require Optionee to make any representation and warranty to the Company as may be required by any applicable law or regulation before allowing the Option to be exercised.

7. **Termination of Relationship.** If Optionee ceases to be a Service Provider (other than by reason of Optionee's death or Disability), Optionee may exercise this Option during the Termination Period set out in the Grant Notice to the extent the Option was vested on the date on which Optionee ceases to be a Service Provider (and in no event later than the expiration date of the term of this Option as set forth in the Grant Notice). To the extent that Optionee does not exercise this Option within the time specified herein, the Option shall terminate.

8. **Disability of Optionee.** If Optionee ceases to be a Service Provider as a result of his or her Disability, Optionee may exercise the Option to the extent the Option is vested on the date of exercise, but only within twelve (12) months from the date Optionee ceases to be a Service Provider (and in no event later than the expiration date of the term of this Option as set forth in the Grant Notice). To the extent that Optionee does not exercise this Option within the time specified herein, the Option shall terminate.

9. **Death of Optionee.** If Optionee ceases to be a Service Provider as a result of the death of Optionee, the vested portion of the Option may be exercised at any time within twelve (12) months following the date of death (and in no event later than the expiration date of the term of this Option as set forth in the Grant Notice) by Optionee's estate or by a person who acquires the right to exercise the Option by bequest or inheritance. To the extent that the Option is not exercised within the time specified herein, the Option shall terminate.

10. **Early Termination of Option.** Notwithstanding anything herein to the contrary, the Administrator may determine in its sole discretion that the Option is terminated as of the date Optionee ceases to be a Service Provider for any reason with regard to any portion of the Option that is not vested as of such date.

11. **Non-Transferability of Option.** This Option may not be transferred in any manner except by will or by the laws of descent or distribution. It may be exercised during the lifetime of Optionee only by Optionee. The terms of this Option shall be binding upon the executors, administrators, heirs, successors, and assigns of Optionee.

12. **Term of Option.** This Option may be exercised only within the term set out in the Grant Notice.

13. **Restrictions on Shares.** Optionee hereby agrees that Shares purchased upon the exercise of the Option shall be subject to such terms and conditions as the Administrator shall determine in its sole discretion, including, without limitation, restrictions on the transferability of Shares, the right of the Company to repurchase Shares, and a right of first refusal in favor of the Company with respect to permitted transfers of Shares. Such terms and conditions may, in the Administrator's sole discretion, be contained in the Exercise Notice with respect to the Option or in such other agreement as the Administrator shall determine and which Optionee hereby agrees to enter into at the request of the Company.

14. **Rules Particular To Specific Countries.**

(a) **Generally.** Optionee shall, if required by the Administrator, enter into an election with the Company or a Subsidiary (in a form approved by the Company) under which any liability to the Company's (or a Subsidiary's) Tax Liability, including, but not limited to, National Insurance Contributions ("**NICs**") and the Fringe Benefit Tax ("**FBT**"), is transferred to and met by Optionee. For purposes of this Section 14, Tax Liability shall mean any and all liability under applicable non-U.S. laws, rules, or regulations from any income tax, the Company's (or a Subsidiary's) NICs, FBT, or similar liability under non-U.S. laws, and Optionee's NICs, FBT, or similar liability that are attributable to: (A) the grant or exercise of, or any other benefit derived by Optionee from the Option; (B) the acquisition by Optionee of the Shares on exercise of the Option; or (C) the disposal of any Shares acquired upon exercise of the Option.

(b) **Tax Indemnity.** Optionee shall indemnify and keep indemnified the Company and any of its Subsidiaries from and against any Tax Liability.

15. **Not a Contract or Guarantee of Employment.** Subject to applicable law, nothing in this Option Agreement, in the Grant Notice, or in the Plan shall confer upon Optionee any right to continue to serve as a Service Provider, nor shall it interfere in any way with the Company's right to terminate Optionee's Service Provider relationship at any time, with or without cause and with or without prior notice.

16. **Optionee Knowingly Agrees.** Optionee represents that he or she has read this Agreement and is familiar with its terms and provisions. Optionee hereby agrees to accept as binding, conclusive, and final all decisions or interpretations of the Board or other administrator of the Plan upon any questions arising under this Agreement.

* * * * *

EXHIBIT B

**GRITSTONE ONCOLOGY
2015 EQUITY INCENTIVE PLAN
EXERCISE NOTICE**

Gritstone Oncology, Inc.
Attention: Stock Administration

1. **Exercise of Option.** Effective as of today, _____, the undersigned (the "Optionee") hereby elects to exercise Optionee's option to purchase _____ shares of the Common Stock (the "Shares") of Gritstone Oncology, Inc., a Delaware corporation (the "Company"), under and pursuant to the Gritstone Oncology, Inc. 2015 Equity Incentive Plan, as amended from time to time (the "Plan") and the Stock Option Grant Notice and Stock Option Agreement dated _____ (the "Option Agreement"). Capitalized terms used herein without definition shall have the meanings given in the Option Agreement.

Date of Grant: _____

Number of Shares as to which Option is Exercised: _____

Exercise Price per Share: \$ _____

Total Exercise Price: \$ _____

Certificate to be issued in name of: _____

Cash Payment delivered herewith: \$ _____

Other form of consideration delivered herewith (only if approved by the Administrator): Form of Consideration: \$ _____

Type of Option: Non-Qualified Stock Option

2. **Representations of Optionee.** Optionee acknowledges that Optionee has received, read, and understood the Plan and the Option Agreement. Optionee agrees to abide by and be bound by their terms and conditions.

3. **Rights as Stockholder.** Until the stock certificate evidencing Shares purchased pursuant to the exercise of the Option is issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to Shares subject to the Option, notwithstanding the exercise of the Option. The Company shall issue (or cause to be issued) such stock certificate promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the stock certificate is issued, except as provided in Section 13 of the Plan.

Optionee shall enjoy rights as a stockholder until such time as Optionee disposes of the Shares or the Company and/or its assignee(s) exercises the Right of First Refusal (as defined below) hereunder. Upon such exercise, Optionee shall have no further rights as a holder of the Shares so purchased except the right to receive payment for the Shares so purchased in accordance with the provisions of this Agreement, and Optionee shall forthwith cause the certificate(s) evidencing the Shares so purchased to be surrendered to the Company for transfer or cancellation.

4. Optionee's Rights to Transfer Shares.

(a) Company's Right of First Refusal. Before any Shares held by Optionee or any permitted transferee (each, a "Holder") may be sold, pledged, assigned, hypothecated, transferred, or otherwise disposed of (each, a "Transfer"), the Company or its assignee(s) shall have a right of first refusal to purchase the Shares proposed to be Transferred on the terms and conditions set forth in this Section 4 (the "Right of First Refusal").

(i) Notice of Proposed Transfer. In the event any Holder desires to Transfer any Shares, the Holder shall deliver to the Company a written notice (the "Notice") stating: (w) the Holder's bona fide intention to sell or otherwise Transfer such Shares; (x) the name of each proposed purchaser or other transferee (the "Proposed Transferee"); (y) the number of Shares to be Transferred to each Proposed Transferee; and (z) the bona fide cash price or other consideration for which the Holder proposes to Transfer the Shares (the "Offered Price"), and the Holder shall offer such Shares at the Offered Price to the Company or its assignee(s).

(ii) Exercise of Right of First Refusal. Within thirty (30) days after receipt of the Notice, the Company and/or its assignee(s) may elect in writing to purchase all, but not less than all, of the Shares proposed to be Transferred to any one or more of the Proposed Transferees. The purchase price shall be determined in accordance with Section 4(a)(iii) hereof.

(iii) Purchase Price. The purchase price (the "Purchase Price") for the Shares repurchased under this Section 4 shall be the Offered Price. If the Offered Price includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the Board in good faith.

(iv) Payment. Payment of the Purchase Price shall be made, at the option of the Company or its assignee(s), in cash (by check), by cancellation of all or a portion of any outstanding indebtedness of the Holder to the Company (or, in the case of repurchase by an assignee, to the assignee), or by any combination thereof within thirty (30) days after receipt of the Notice or in the manner and at the times mutually agreed to by the Company and the Holder.

(v) Holder's Right to Transfer. If all of the Shares proposed to be Transferred in the Notice are not purchased by the Company and/or its assignee(s) as provided in this Section 4, then the Holder may sell or otherwise Transfer such Shares to that Proposed Transferee at the Offered Price or at a higher price, provided that such sale or other Transfer is consummated within one hundred twenty (120) days after the date of the Notice and provided further that any such sale or other Transfer is effected in accordance with any applicable securities laws and the Proposed Transferee agrees in writing that the provisions of this Section 4 and the Restricted Stock Purchase Agreement, if applicable, shall continue to apply to the Shares in the hands of such Proposed Transferee. If the Shares described in the Notice are not Transferred to the Proposed Transferee within such 120-day period, a new Notice shall be given to the Company, and the Company and/or its assignees shall again be offered the Right of First Refusal as provided herein before any Shares held by the Holder may be sold or otherwise Transferred.

(b) **Exception for Certain Family Transfers.** Anything to the contrary contained in this Section 4 notwithstanding, the Transfer of any or all of the Shares during Optionee's lifetime or upon Optionee's death by will or intestacy to Optionee's Immediate Family or a trust for the benefit of Optionee's Immediate Family shall be exempt from the Right of First Refusal. As used herein, "Immediate Family" shall mean spouse, lineal descendant or antecedent, father, mother, brother or sister, or stepchild (whether or not adopted). In such case, the transferee or other recipient shall receive and hold the Shares so Transferred subject to the provisions of this Section 4 (including the Right of First Refusal) and the Restricted Stock Purchase Agreement, if applicable, and there shall be no further Transfer of such Shares except in accordance with the terms of this Section 4.

(c) **Termination of Right of First Refusal.** The Right of First Refusal shall terminate as to all Shares upon a sale of the Company's Common Stock to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act of 1933, as amended (a "Public Offering").

5. **Transfer Restrictions.** Any transfer or sale of the Shares is subject to restrictions on transfer imposed by any applicable state and federal securities laws. Any Transfer or attempted Transfer of any of the Shares not in accordance with the terms of this Agreement, including the Right of First Refusal provided in this Agreement, shall be void and the Company may enforce the terms of this Agreement by stop-transfer instructions or similar actions by the Company and its agents or designees.

6. **Tax Consultation.** Optionee understands that Optionee may suffer adverse tax consequences as a result of Optionee's purchase or disposition of the Shares. Optionee represents that Optionee has consulted with any tax consultants Optionee deems advisable in connection with the purchase or disposition of the Shares and that Optionee is not relying on the Company for any tax advice.

7. **Restrictive Legends and Stop-Transfer Orders.**

(a) **Legends.** Optionee understands and agrees that the Company shall cause the legends set forth below or legends substantially equivalent thereto, to be placed upon any certificate(s) evidencing ownership of the Shares together with any other legends that may be required by state or federal securities laws:

THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO, OR IN CONNECTION WITH, THE SALE OR DISTRIBUTION THEREOF. NO SUCH SALE OR DISPOSITION MAY BE EFFECTED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL SATISFACTORY TO THE CORPORATION THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933, AS AMENDED.

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER AND RIGHT OF FIRST REFUSAL OPTIONS HELD BY THE ISSUER OR ITS ASSIGNEE(S) AS SET FORTH IN THE EXERCISE NOTICE BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SHARES, A COPY OF WHICH MAY BE OBTAINED AT THE PRINCIPAL OFFICE OF THE ISSUER. SUCH TRANSFER RESTRICTIONS AND RIGHT OF FIRST REFUSAL ARE BINDING ON TRANSFEREES OF THESE SHARES.

(b) Stop-Transfer Notices. Optionee agrees that, in order to ensure compliance with the restrictions referred to herein, the Company may issue appropriate "stop-transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

(c) Refusal to Transfer. The Company shall not be required (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Agreement or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such Shares shall have been so transferred.

8. Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, this Agreement shall be binding upon Optionee and his or her heirs, executors, administrators, successors, and assigns.

9. Interpretation. Any dispute regarding the interpretation of this Agreement shall be submitted by Optionee or by the Company forthwith to the Company's Board of Directors or committee thereof that is responsible for the administration of the Plan (the "Administrator"), which shall review such dispute at its next regular meeting. The resolution of such a dispute by the Administrator shall be final and binding on the Company and on Optionee.

10. Governing Law; Severability. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware excluding that body of law pertaining to conflicts of law. Should any provision of this Agreement be determined by a court of law to be illegal or unenforceable, the other provisions shall nevertheless remain effective and shall remain enforceable.

11. Notices. Any notice required or permitted hereunder shall be given in writing and shall be deemed effectively given upon personal delivery or upon deposit in the United States mail by certified mail, with postage and fees prepaid, addressed to the other party at its address

as shown below beneath its signature, or to such other address as such party may designate in writing from time to time to the other party.

12. **Further Instruments.** Optionee hereby agrees to execute such further instruments and to take such further action as may be reasonably necessary to carry out the purposes and intent of this Agreement, including, without limitation, the Investment Representation Statement in the form attached hereto as Exhibit C.

13. **Delivery of Payment.** Optionee herewith delivers to the Company the full Exercise Price for the Shares, as well as any applicable withholding tax.

14. **Entire Agreement.** The Plan and Option Agreement are incorporated herein by reference. This Agreement, the Plan, the Option Agreement, the Investment Representation Statement, and the Restricted Stock Purchase Agreement, if applicable, constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Optionee with respect to the subject matter hereof.

Accepted by:

GRITSTONE ONCOLOGY, INC.:

By: _____

Name: _____

Title: _____

Address: _____

Submitted by:

OPTIONEE:

By: _____

Name: _____

Address: _____

**SIGNATURE PAGE TO GRITSTONE ONCOLOGY, INC.
EXERCISE NOTICE**

EXHIBIT C

INVESTMENT REPRESENTATION STATEMENT

OPTIONEE : _____
COMPANY : Gritstone Oncology, Inc.
SECURITY : Common Stock
AMOUNT : _____
DATE : _____

In connection with the purchase of the above-listed shares of Common Stock (the "Securities") of Gritstone Oncology, Inc., a Delaware corporation (the "Company"), the undersigned (the "Optionee") represents to the Company the following:

1. Optionee is aware of the Company's business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. Optionee is acquiring these Securities for investment for Optionee's own account only and not with a view to, or for resale in connection with, any "distribution" thereof within the meaning of the Securities Act of 1933, as amended (the "Securities Act").
2. Optionee acknowledges and understands that the Securities constitute "restricted securities" under the Securities Act and have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Optionee's investment intent as expressed herein. Optionee understands that, in the view of the Securities and Exchange Commission, the statutory basis for such exemption may be unavailable if Optionee's representation was predicated solely upon a present intention to hold these Securities for the minimum capital gains period specified under tax statutes, for a deferred sale, for or until an increase or decrease in the market price of the Securities, or for a period of one (1) year or any other fixed period in the future. Optionee further understands that the Securities must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. Optionee further acknowledges and understands that the Company is under no obligation to register the Securities. Optionee understands that the certificate evidencing the Securities will be imprinted with a legend which prohibits the transfer of the Securities unless they are registered or such registration is not required in the opinion of counsel satisfactory to the Company and any other legend required under applicable securities laws or agreements.
3. Optionee is familiar with the provisions of Rule 701 and Rule 144, each promulgated under the Securities Act, which, in substance, permit limited public resale of "restricted securities" acquired, directly or indirectly, from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions. Rule 701 provides that if the issuer qualifies under Rule 701 at the time of the grant of the Option to Optionee, the exercise will be exempt from registration under the Securities Act. In the event the Company becomes subject to the reporting requirements of Section 13

or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), ninety (90) days thereafter (or such longer period as any market stand-off agreement may require), the Securities exempt under Rule 701 may under present law be resold, subject to the satisfaction of certain of the conditions specified by Rule 144, including: (1) the resale being made through a broker in an unsolicited "broker's transaction" or in transactions directly with a market maker (as this term is defined under the Exchange Act); and, in the case of an affiliate, (2) the availability of certain public information about the Company, (3) the amount of Securities being sold during any three (3) month period not exceeding the limitations specified in Rule 144(e), and (4) the timely filing of a Form 144, if applicable.

In the event that the Company does not qualify under Rule 701 at the time of grant of the Option to Optionee, then the Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which requires the resale to occur not less than six (6) months, or, in the event the Company is not subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act, not less than one (1) year, after the later of the date the Securities were sold by the Company or the date the Securities were sold by an affiliate of the Company, within the meaning of Rule 144; and, in the case of acquisition of the Securities by an affiliate, the satisfaction of the conditions set forth in Sections 1, 2, 3, and 4 of the paragraph immediately above or, in the case of a non-affiliate who subsequently holds the Securities less than one (1) year, the satisfaction of the conditions set forth in Section 2 of the paragraph immediately above.

4. Optionee further understands that in the event all of the applicable requirements of Rule 701 or 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required; and that, notwithstanding the fact that Rules 701 and 144 are not exclusive, the Staff of the Securities and Exchange Commission has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rules 701 or 144 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk. Optionee understands that no assurances can be given that any such other registration exemption will be available in such event.

Signature of Optionee:

Date: _____

**SIGNATURE PAGE TO GRITSTONE ONCOLOGY, INC.
INVESTMENT REPRESENTATION STATEMENT**

EXHIBIT D

GRITSTONE ONCOLOGY, INC.

2015 EQUITY INCENTIVE PLAN

RESTRICTED STOCK PURCHASE AGREEMENT

THIS RESTRICTED STOCK PURCHASE AGREEMENT (the "Agreement") is made between _____ (the "Purchaser") and Gritstone Oncology, Inc., a Delaware corporation (the "Company"), as of _____, _____.

RECITALS

(1) Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Agreement. Pursuant to the exercise of the Option granted to Purchaser under the Company's 2015 Equity Incentive Plan and pursuant to the Stock Option Grant Notice and Stock Option Agreement dated _____, by and between the Company and Purchaser with respect to such grant (the "Option Agreement"), which Option Agreement is hereby incorporated by reference, Purchaser has elected to purchase _____ of those shares which have not become vested under the vesting schedule set forth in the Option Agreement (the "Unvested Shares"). The Unvested Shares and the shares subject to the Option Agreement which have become vested are sometimes collectively referred to herein as the "Shares."

(2) As required by the Option Agreement, as a condition to Purchaser's election to exercise the option, Purchaser must execute this Agreement, which sets forth the rights and obligations of the parties with respect to Shares acquired upon exercise of the Option.

AGREEMENT

1. Repurchase Option.

(a) Generally. If Purchaser ceases to be a Service Provider for any reason, including for cause, death, and Disability, the Company or its assignee shall have the right and option to purchase from Purchaser, or Purchaser's personal representative, as the case may be, all of Purchaser's Unvested Shares as of the date on which Purchaser ceases to be a Service Provider at the exercise price paid by Purchaser for such Shares in connection with the exercise of the Option (the "Repurchase Option").

(b) Exercise. The Company may exercise its Repurchase Option by delivering, personally or by registered mail, to Purchaser (or his or her transferee or legal representative, as the case may be), within ninety (90) days of the date on which Purchaser ceases to be a Service Provider, a notice in writing indicating the Company's intention to exercise the Repurchase Option and setting forth a date for closing not later than thirty (30) days from the mailing of such notice. The closing shall take place at the Company's office. At the closing, the holder of the certificates for the Unvested Shares being transferred shall deliver the stock certificate or certificates evidencing the Unvested Shares, and the Company shall deliver the purchase price therefor.

(c) Payment Option. At its option, the Company may elect to make payment for the Unvested Shares to a bank selected by the Company. The Company shall avail itself of this option by a notice in writing to Purchaser stating the name and address of the bank, date of closing, and waiving the closing at the Company's office.

(d) Termination. If the Company does not elect to exercise the Repurchase Option conferred above by giving the requisite notice within ninety (90) days following the date on which Purchaser ceases to be a Service Provider, the Repurchase Option shall terminate.

(e) Vesting. One hundred percent (100%) of the Unvested Shares shall initially be subject to the Repurchase Option. The Unvested Shares shall be released from the Repurchase Option in accordance with the Vesting Schedule set forth in the Grant Notice until all Shares are released from the Repurchase Option. Fractional Shares shall be rounded to the nearest whole share.

2. Transferability of the Shares; Escrow.

(a) Transfer from Purchaser to Company. Purchaser hereby authorizes and directs the Secretary of the Company, or such other person designated by the Company from time to time, to transfer the Unvested Shares as to which the Repurchase Option has been exercised from Purchaser to the Company.

(b) Escrow. To insure the availability for delivery of Purchaser's Unvested Shares upon repurchase by the Company pursuant to the Repurchase Option under Section 1, Purchaser hereby appoints the Secretary, or any other person designated by the Company from time to time as escrow agent, as its attorney-in-fact to sell, assign, and transfer unto the Company, such Unvested Shares, if any, repurchased by the Company pursuant to the Repurchase Option and shall, upon execution of this Agreement, deliver and deposit with the Secretary of the Company, or such other person designated by the Company from time to time, the share certificate(s) representing the Unvested Shares, together with the stock assignment duly endorsed in blank, attached hereto as Exhibit E. The Unvested Shares and stock assignment shall be held by the Secretary, or such other person designated by the Company from time to time, in escrow, pursuant to the Joint Escrow Instructions of the Company and Purchaser attached as Exhibit F hereto, until the Company exercises its Repurchase Option as provided in Section 1, until such Unvested Shares are vested, or until such time as this Agreement no longer is in effect. As a further condition to the Company's obligations under this Agreement, the spouse or registered domestic partner of Purchaser, if any, shall execute and deliver to the Company the Consent of Spouse or Domestic Partner attached hereto as Exhibit G. Upon vesting of the Unvested Shares, the escrow agent shall promptly deliver to Purchaser the certificate or certificates representing such Shares in the escrow agent's possession belonging to Purchaser, and the escrow agent shall be discharged of all further obligations hereunder; provided, however, that the escrow agent shall nevertheless retain such certificate or certificates as escrow agent if so required pursuant to other restrictions imposed pursuant to this Agreement.

(c) **Liability.** The Company, or its designee, shall not be liable for any act it may do or omit to do with respect to holding the Shares in escrow and while acting in good faith and in the exercise of its judgment.

(d) **Restrictions on Transfer.** Transfer or sale of the Shares is subject to restrictions on transfer imposed by any applicable state and federal securities laws. Any transferee shall hold such Shares subject to all of the provisions hereof and the Exercise Notice executed by Purchaser with respect to any Unvested Shares purchased by Purchaser and shall acknowledge the same by signing a copy of this Agreement. Any transfer or attempted transfer of any of the Shares not in accordance with the terms of this Agreement shall be void and the Company may enforce the terms of this Agreement by stop-transfer instructions or similar actions by the Company and its agents or designees.

3. **Ownership, Voting Rights, Duties.** This Agreement shall not affect in any way the ownership, voting rights, or other rights or duties of Purchaser, except as specifically provided herein.

4. **Adjustment for Stock Split.** All references to the number of Shares and the purchase price of the Shares in this Agreement shall be appropriately adjusted to reflect any stock split, stock dividend, or other change in the Shares which may be made by the Company after the date of this Agreement.

5. **Notices.** Notices required hereunder shall be given in person or by registered mail to the address of Purchaser shown on the records of the Company, and to the Company at its principal executive office.

6. **Survival of Terms.** This Agreement shall apply to and bind Purchaser and the Company and their respective permitted assignees and transferees, heirs, legatees, executors, administrators, and legal successors.

7. **Section 83(b) Election for Unvested Shares Purchased Pursuant to a Non-Qualified Stock Option.** Purchaser hereby acknowledges that he or she has been informed that, with respect to the exercise of a Non-Qualified Stock Option for Unvested Shares, that unless an election is filed by Purchaser with the Internal Revenue Service and, if necessary, the proper state taxing authorities, within thirty (30) days of the purchase of the Shares, electing pursuant to Section 83(b) of the Code (and similar state tax provisions if applicable) to be taxed currently on any difference between the purchase price of the Shares and their Fair Market Value on the date of purchase, there will be a recognition of taxable income to Purchaser, measured by the excess, if any, of the fair market value of the Shares, at the time the Company's Repurchase Option lapses, over the purchase price for the Shares. Purchaser represents that Purchaser has consulted any tax consultant(s) Purchaser deems advisable in connection with the purchase of the Shares or the filing of the Election under Section 83(b) and similar tax provisions.

PURCHASER ACKNOWLEDGES THAT IT IS PURCHASER'S SOLE RESPONSIBILITY AND NOT THE COMPANY'S TO FILE TIMELY THE ELECTION UNDER SECTION 83(b), EVEN IF PURCHASER REQUESTS THE COMPANY OR ITS REPRESENTATIVE TO MAKE THIS FILING ON PURCHASER'S BEHALF.

8. **Representations.** Purchaser has reviewed with his or her own tax advisors the federal, state, local, and foreign tax consequences of this investment and the transactions contemplated by this Agreement. Purchaser is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. Purchaser understands that Purchaser (and not the Company) shall be responsible for his or her own tax liability that may arise as a result of this investment or the transactions contemplated by this Agreement.

9. **Governing Law; Severability.** This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware excluding that body of law pertaining to conflicts of law. Should any provision of this Agreement be determined by a court of law to be illegal or unenforceable, the other provisions shall nevertheless remain effective and shall remain enforceable.

(Signature Page Follows)

Purchaser represents that he or she has read this Agreement and is familiar with its terms and provisions. Purchaser hereby agrees to accept as binding, conclusive, and final all decisions or interpretations of the Board or other administrator of the Plan upon any questions arising under this Agreement.

IN WITNESS WHEREOF, this Agreement is deemed made as of the date first set forth above.

GRITSTONE ONCOLOGY, INC.

By: _____
Name: _____
Title: _____

PURCHASER

By: _____
Name: _____
Address: _____

**SIGNATURE PAGE TO GRITSTONE ONCOLOGY, INC.
RESTRICTED STOCK PURCHASE AGREEMENT**

EXHIBIT E

ASSIGNMENT SEPARATE FROM CERTIFICATE

FOR VALUE RECEIVED I, _____, hereby sell, assign, and transfer unto (_____) shares of the Common Stock of Gritstone Oncology, Inc. registered in my name on the books of said corporation represented by Certificate No. _____ herewith and do hereby irrevocably constitute and appoint to transfer the said stock on the books of the within named corporation with full power of substitution in the premises.

This Assignment Separate from Certificate may be used only in accordance with the Restricted Stock Purchase Agreement between Gritstone Oncology, Inc. and the undersigned dated _____.

Dated: _____

Signature: _____

INSTRUCTIONS: Please do not fill in any blanks other than the signature line. The purpose of this assignment is to enable the Company to exercise the Repurchase Option, as set forth in the Restricted Stock Purchase Agreement, without requiring additional signatures on the part of Purchaser.

EXHIBIT F
JOINT ESCROW INSTRUCTIONS

Secretary
Gritstone Oncology, Inc.

Dear Secretary:

As escrow agent (the "Escrow Agent") for both Gritstone Oncology, Inc., a Delaware corporation (the "Company"), and the undersigned purchaser of stock of the Company (the "Purchaser"), you are hereby authorized and directed to hold the documents delivered to you pursuant to the terms of that certain Restricted Stock Purchase Agreement (the "Agreement") between the Company and the undersigned, in accordance with the following instructions:

1. In the event the Company or any entitled parties (referred to collectively for convenience herein as the "Company") exercises the Company's Repurchase Option set forth in the Agreement, the Company shall give to Purchaser and you a written notice specifying the number of shares of stock to be purchased, the purchase price, and the time for a closing hereunder at the principal office of the Company. Purchaser and the Company hereby irrevocably authorize and direct you to close the transaction contemplated by such notice in accordance with the terms of said notice.

2. At the closing, you are directed (a) to date the stock assignments necessary for the transfer in question, (b) to fill in the number of shares being transferred, and (c) to deliver such stock assignments, together with the certificate evidencing the shares of stock to be transferred, to the Company or its assignee, against the simultaneous delivery to you of the purchase price (by cash, check, or a combination thereof) for the number of shares of stock being purchased pursuant to the exercise of the Company's Repurchase Option.

3. Purchaser irrevocably authorizes the Company to deposit with you any certificates evidencing shares of stock to be held by you hereunder and any additions and substitutions to said shares as defined in the Agreement. Purchaser does hereby irrevocably constitute and appoint you as Purchaser's attorney-in-fact and agent for the term of this escrow to execute, with respect to such securities, all documents necessary or appropriate to make such securities negotiable and to complete any transaction herein contemplated, including but not limited to the filing with any applicable state blue sky authority of any required applications for consent to, or notice of transfer of, the securities. Subject to the provisions of this paragraph 3 and to the terms of the Agreement, Purchaser shall exercise all rights and privileges of a stockholder of the Company while the stock is held by you.

4. Upon written request of Purchaser, but no more than once per calendar year, unless the Company's Repurchase Option has been exercised, you will deliver to Purchaser a certificate or certificates representing the number of shares of stock as are not then subject to the Company's Repurchase Option. Within one hundred twenty (120) days after Purchaser ceases to be a Service Provider, you will deliver to Purchaser a certificate or certificates representing the aggregate number of shares held or issued pursuant to the Agreement and not purchased by the Company or any other entitled parties pursuant to exercise of the Company's Repurchase Option.

5. If at the time of termination of this escrow you should have in your possession any documents, securities, or other property belonging to Purchaser, you shall deliver all of the same to Purchaser and shall be discharged of all further obligations hereunder.

6. Your duties hereunder may be altered, amended, modified, or revoked only by a writing signed by all of the parties hereto.

7. You shall be obligated only for the performance of such duties as are specifically set forth herein and may rely and shall be protected in relying or refraining from acting on any instrument reasonably believed by you to be genuine and to have been signed or presented by the proper party or parties. You shall not be personally liable for any act you may do or omit to do hereunder as Escrow Agent or as attorney-in-fact for Purchaser while acting in good faith, and any act done or omitted by you pursuant to the advice of your own attorneys shall be conclusive evidence of such good faith.

8. You are hereby expressly authorized to disregard any and all warnings given by any of the parties hereto or by any other person or corporation, excepting only orders or process of courts of law and are hereby expressly authorized to comply with and obey orders, judgments, or decrees of any court. In case you obey or comply with any such order, judgment, or decree, you shall not be liable to any of the parties hereto or to any other person, firm, or corporation by reason of such compliance, notwithstanding any such order, judgment, or decree being subsequently reversed, modified, annulled, set aside, vacated, or found to have been entered without jurisdiction.

9. You shall not be liable in any respect on account of the identity, authorities, or rights of the parties executing or delivering or purporting to execute or deliver the Agreement or any documents or papers deposited or called for hereunder.

10. You shall not be liable for the expiration of any rights under any applicable state, federal, or local statute of limitations or similar statute or regulation with respect to these Joint Escrow Instructions or any documents deposited with you.

11. You shall be entitled to employ such legal counsel and other experts as you may deem necessary properly to advise you in connection with your obligations hereunder, may rely upon the advice of such counsel, and may pay such counsel reasonable compensation therefor.

12. Your responsibilities as Escrow Agent hereunder shall terminate if you shall cease to be an officer or agent of the Company or if you shall resign by written notice to each party. In the event of any such termination, the Company shall appoint a successor Escrow Agent.

13. If you reasonably require other or further instruments in connection with these Joint Escrow Instructions or obligations in respect hereto, the necessary parties hereto shall join in furnishing such instruments.

14. It is understood and agreed that should any dispute arise with respect to the delivery and/or ownership or right of possession of the securities held by you hereunder, you are authorized and directed to retain in your possession, without liability to anyone, all or any part of said securities until such disputes shall have been settled either by mutual written agreement of the parties concerned or by a final order, decree, or judgment of a court of competent jurisdiction after the time for appeal has expired and no appeal has been perfected, but you shall be under no duty whatsoever to institute or defend any such proceedings.

15. Any notice required or permitted hereunder shall be given in writing and shall be deemed effectively given upon personal delivery or upon deposit in the United States Post Office, by registered or certified mail with postage and fees prepaid, addressed to each of the other parties thereunto entitled at such addresses as a party may designate by written notice to each of the other parties hereto.

16. By signing these Joint Escrow Instructions, you become a party hereto only for the purpose of said Joint Escrow Instructions; you do not become a party to the Agreement.

17. This instrument shall be binding upon and inure to the benefit of the parties hereto, and their respective successors and permitted assigns.

18. These Joint Escrow Instructions shall be governed by, and construed and enforced in accordance with, the laws of the State of Delaware, excluding that body of law pertaining to conflicts of law.

(Signature Page Follows)

IN WITNESS WHEREOF, these Joint Escrow Instructions shall be effective as of the date first set forth above.

GRITSTONE ONCOLOGY, INC.

By: _____
Name: _____
Title: _____

PURCHASER

By: _____
Name: _____
Address: _____

ESCROW AGENT

By: _____
Name: _____
Title: _____

**SIGNATURE PAGE TO GRITSTONE ONCOLOGY, INC.
JOINT ESCROW INSTRUCTIONS**

EXHIBIT G

CONSENT OF SPOUSE OR DOMESTIC PARTNER

I, _____, spouse or registered domestic partner of _____, have read and approve the Restricted Stock Purchase Agreement, dated _____, between my spouse or registered domestic partner and Gritstone Oncology, Inc. In consideration of granting of the right to my spouse or registered domestic partner to purchase shares of Gritstone Oncology, Inc. set forth in the Restricted Stock Purchase Agreement, I hereby appoint my spouse or registered domestic partner as my attorney-in-fact in respect to the exercise of any rights under the Agreement and agree to be bound by the provisions of the Restricted Stock Purchase Agreement insofar as I may have any rights in said Restricted Stock Purchase Agreement or any shares issued pursuant thereto under the community property laws or similar laws relating to marital property in effect in the state of our residence as of the date of the signing of the foregoing Restricted Stock Purchase Agreement.

Dated: _____

Signature of Spouse or Registered Domestic Partner

FORM OF 83(b) ELECTION AND INSTRUCTIONS

These instructions are provided to assist you if you choose to make an election under Section 83(b) of the Internal Revenue Code, as amended, with respect to the shares of common stock of Gritstone Oncology, Inc. transferred to you. **Please consult with your personal tax advisor as to whether an election of this nature will be in your best interests in light of your personal tax situation.**

The executed original of the Section 83(b) election must be filed with the Internal Revenue Service not later than thirty (30) days after the date the shares were transferred to you. PLEASE NOTE: There is no remedy for failure to file on time.

The steps outlined below should be followed to ensure the election is mailed and filed correctly and in a timely manner. ALSO, PLEASE NOTE: If you make the Section 83(b) election, the election is irrevocable.

Complete the Section 83(b) election form (attached as Attachment 1) and make four (4) copies of the signed election form. (Your spouse, if any, should sign the Section 83(b) election form as well.)

Prepare a cover letter to the Internal Revenue Service (sample letter attached as Attachment 2).

Send the cover letter with the originally executed Section 83(b) election form and one (1) copy via certified mail, return receipt requested to the Internal Revenue Service at the address of the Internal Revenue Service where you file your personal tax returns. We suggest that you have the package date-stamped at the post office. The post office will provide you with a certified receipt that includes a dated postmark. Enclose a self-addressed, stamped envelope so that the Internal Revenue Service may return a date-stamped copy to you. However, your postmarked receipt is your proof of having timely filed the Section 83(b) election if you do not receive confirmation from the Internal Revenue Service.

One (1) copy must be sent to Gritstone Oncology, Inc. for its records and **one (1) copy must be attached to your federal income tax return for the applicable calendar year.**

Retain the Internal Revenue Service file stamped copy (when returned) for your records.

Please consult your personal tax advisor for the address of the office of the Internal Revenue Service to which you should mail your election form.

ATTACHMENT 1

ELECTION UNDER INTERNAL REVENUE CODE SECTION 83(b)

The undersigned taxpayer (the "Taxpayer") hereby elects, pursuant to Section 83(b) of the Internal Revenue Code of 1986, as amended, to include in Taxpayer's gross income for the current taxable year the amount of any compensation taxable to Taxpayer in connection with Taxpayer's receipt of shares (the "Shares") of Common Stock of Gritstone Oncology, Inc., a Delaware corporation (the "Company").

The name, address, and taxpayer identification number of Taxpayer are:

SSN: _____

The name, address, and taxpayer identification number of Taxpayer's spouse are (complete if applicable):

SSN: _____

Description of the property with respect to which the election is being made:

() shares of Common Stock of the Company.

The date on which the property was transferred was . The taxable year to which this election relates is calendar year .

Nature of restrictions to which the property is subject:

The Shares are subject to repurchase by the Company or its assignee upon the occurrence of certain events. This repurchase right lapses based upon the continued performance of services by Taxpayer over time.

The fair market value at the time of transfer (determined without regard to any lapse restrictions, as defined in Treasury Regulation Section 1.83-3(i)) of the Shares was \$ per Share.

The amount paid by Taxpayer for Shares was per share.

A copy of this statement has been furnished to the Company.

Dated: _____ Taxpayer Signature _____

The undersigned spouse of Taxpayer joins in this election. (Complete if applicable.)

Dated: _____ Spouse's Signature _____

ATTACHMENT 2

SAMPLE COVER LETTER TO INTERNAL REVENUE SERVICE

_____, _____
VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Internal Revenue Service [Address where taxpayer files returns]

Re: Election under Section 83(b) of the Internal Revenue Code of 1986

Taxpayer: _____

Taxpayer's Social Security Number: _____

Taxpayer's Spouse: _____

Taxpayer's Spouse's Social Security Number: _____

Ladies and Gentlemen:

Enclosed please find an original and one copy of an Election under Section 83(b) of the Internal Revenue Code of 1986, as amended, being made by the taxpayer referenced above. Please acknowledge receipt of the enclosed materials by stamping the enclosed copy of the Election and returning it to me in the self-addressed stamped envelope provided herewith.

Very truly yours,

Enclosures

cc: Gritstone Oncology, Inc.

GRITSTONE ONCOLOGY, INC.
2015 EQUITY INCENTIVE PLAN
STOCK PURCHASE RIGHT GRANT NOTICE AND
RESTRICTED STOCK PURCHASE AGREEMENT

Pursuant to its 2015 Equity Incentive Plan (the "Plan"), Gritstone Oncology, Inc., a Delaware corporation (the "Company"), hereby grants to the Purchaser listed below ("Purchaser"), the right to purchase the number of shares of the Company's Common Stock set forth below (the "Shares") at the purchase price set forth below (the "Stock Purchase Right"). This Stock Purchase Right is subject to all of the terms and conditions set forth herein, in the Plan and in the certain Restricted Stock Purchase Agreement attached hereto as Exhibit A (the "Restricted Stock Purchase Agreement"), each of which is incorporated herein by reference. Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Stock Purchase Right Grant Notice (the "Grant Notice") and the Restricted Stock Purchase Agreement.

Purchaser: _____

Date of Grant: _____

Vesting Start Date: _____

Purchase Price per Share: _____

Number of Shares: _____

Vesting Schedule: The Shares subject to this Share Purchase Right shall vest and be released from the Company's Repurchase Option, as set forth in the Restricted Stock Purchase Agreement, according to the following schedule:

25% of the Shares shall be released from the Company's Repurchase Option (as defined in the Restricted Stock Purchase Agreement) on the first anniversary of the Vesting Start Date and 1/48th of the total number of Shares shall be released from the Company's Repurchase Option thereafter so that 100% of the Shares shall be released from such Repurchase Option on the fourth (4th) anniversary of the Vesting Start Date, subject to Purchaser remaining a Service Provider through each such vesting date.

Termination Date: This Stock Purchase Right shall terminate if not exercised prior to the thirty-first (31st) day following the Date of Grant set forth above.

By his or her signature and the Company's signature below, Purchaser agrees to be bound by the terms and conditions of the Plan, the Restricted Stock Purchase Agreement and this Grant Notice. Purchaser has reviewed the Restricted Stock Purchase Agreement, the Plan and this Grant Notice in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands the provisions of this Grant Notice, the Restricted Stock Purchase Agreement and the Plan. Purchaser hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator of the Plan upon any questions arising under the Plan, this Grant Notice or the Restricted Stock Purchase Agreement. If Purchaser is married, his or her spouse has signed the Consent of Spouse attached to this Grant Notice as Exhibit D.

GRITSTONE ONCOLOGY, INC.:

By: _____
Print Name: _____
Title: _____
Address: _____

PURCHASER:

By: _____
Print Name: _____
Title: _____
Address: _____

**SIGNATURE PAGE TO GRITSTONE ONCOLOGY, INC.
STOCK PURCHASE RIGHT GRANT NOTICE**

EXHIBIT A

**TO STOCK PURCHASE RIGHT GRANT NOTICE
RESTRICTED STOCK PURCHASE AGREEMENT**

Pursuant to the Stock Purchase Right Grant Notice (the "Grant Notice") to which this Restricted Stock Purchase Agreement (this "Agreement") is attached, Gritstone Oncology, Inc., a Delaware corporation (the "Company") has granted to Purchaser (as defined in the Grant Notice) the right to purchase the number of shares of Restricted Stock under the Gritstone Oncology, Inc. 2015 Equity Incentive Plan (the "Plan") indicated in the Grant Notice.

1. General.

(a) Defined Terms. Capitalized terms not specifically defined herein shall have the meanings specified in the Plan and the Grant Notice.

(b) Incorporation of Terms of Plan. The Shares are subject to the terms and conditions of the Plan, which is incorporated herein by reference.

2. Grant of Restricted Stock.

(a) Grant of Restricted Stock. In consideration of Purchaser's agreement to remain in the employ of the Company or its Subsidiaries, if Purchaser is an Employee, or to continue to provide services to the Company or its Subsidiaries, if Purchaser is a Consultant, or to serve as a Director, if Purchaser is a Director, and for other good and valuable consideration, effective as of the Date of Grant set forth in the Grant Notice (the "Grant Date"), the Company irrevocably grants to Purchaser the right to purchase the Shares at any time prior to the Termination Date set forth in the Grant Notice, upon the terms and conditions set forth in the Plan and this Agreement.

(b) Purchase Price. The purchase price of the Shares shall be as set forth in the Grant Notice, without commission or other charge (the "Purchase Price"). The Purchase Price shall be paid by cash or check.

(c) Issuance of Shares. The issuance of the Shares under this Agreement shall occur at the principal office of the Company simultaneously with the execution of this Agreement by the parties or on such other date as the Company and Purchaser shall agree (the "Issuance Date"). Subject to the provisions of Section 3 below, on the Issuance Date, the Company shall issue the Shares (which shall be issued in Purchaser's name).

(d) Conditions to Issuance of Stock Certificates. The Shares, or any portion thereof, may be either previously authorized but unissued shares or issued shares which have then been reacquired by the Company. Such Shares shall be fully paid and nonassessable. The Company shall not be required to issue or deliver any Shares prior to fulfillment of all of the following conditions:

(i) The admission of such Shares to listing on all stock exchanges on which the Company's Common Stock is then listed; and

(ii) The completion of any registration or other qualification of such shares under any state or federal law or under rulings or regulations of the Securities and Exchange Commission or of any other governmental regulatory body, which the Administrator shall, in its absolute discretion, deem necessary or advisable; and

(iii) The obtaining of any approval or other clearance from any state or federal governmental agency which the Administrator shall, in its absolute discretion, determine to be necessary or advisable; and

(iv) The receipt by the Company of full payment for such Shares, including payment of all amounts which, under federal, state or local tax law, the Company (or other employer corporation) is required to withhold upon issuance of such Shares; and

(v) The lapse of such reasonable period of time following the Issuance Date as the Administrator may from time to time establish for reasons of administrative convenience.

(e) Consideration to the Company. In consideration of the issuance of the Shares by the Company, Purchaser agrees to render faithful and efficient services to the Company or any Subsidiary. Nothing in the Plan or this Agreement shall confer upon Purchaser any right to (a) continue in the employ of the Company or any Subsidiary or shall interfere with or restrict in any way the rights of the Company and its Subsidiaries, which are hereby expressly reserved, to discharge Purchaser, if Purchaser is an Employee, or (b) continue to provide services to the Company or any Subsidiary or shall interfere with or restrict in any way the rights of the Company or its Subsidiaries, which are hereby expressly reserved, to terminate the services of Purchaser, if Purchaser is a Consultant, at any time for any reason whatsoever, with or without cause, except to the extent expressly provided otherwise in a written agreement between the Company and Purchaser.

3. Repurchase Option.

(a) If Purchaser ceases to be a Service Provider for any reason, including for cause, death and Disability, the Company or its assignee shall have the right and option to purchase from Purchaser, or Purchaser's personal representative, as the case may be, all of Purchaser's Unreleased Shares as of the date on which Purchaser ceases to be a Service Provider at the purchase price paid by Purchaser for such Shares in connection with the Stock Purchase Rights (the "Repurchase Option").

(b) The Company may exercise its Repurchase Option by delivering, personally or by registered mail, to Purchaser (or his or her transferee or legal representative, as the case may be), within ninety (90) days of the date on which Purchaser ceases to be a Service Provider, a notice in writing indicating the Company's intention to exercise the Repurchase Option and setting forth a date for closing not later than thirty (30) days from the mailing of such notice. The closing shall take place at the Company's office. At the closing, the holder of the certificates for the Unreleased Shares being transferred shall deliver the stock certificate or certificates evidencing the Unreleased Shares, and the Company shall deliver the purchase price therefor.

(c) At its option, the Company may elect to make payment for the Unreleased Shares to a bank selected by the Company. The Company shall avail itself of this option by a notice in writing to Purchaser stating the name and address of the bank, date of closing, and waiving the closing at the Company's office.

(d) If the Company does not elect to exercise the Repurchase Option conferred above by giving the requisite notice within ninety (90) days following the date on which Purchaser ceases to be a Service Provider, the Repurchase Option shall terminate.

(e) One hundred percent (100%) of the Shares shall initially be subject to the Repurchase Option. The Shares shall be released from the Repurchase Option in accordance with the Vesting Schedule set forth in the Grant Notice until all Shares are released from the Repurchase Option. Fractional Shares shall be rounded to the nearest whole share.

(f) Any Shares which from time to time have not yet been released from the Company's Repurchase Option pursuant to Section 3(e) above shall be referred to herein as "Unreleased Shares."

4. Transferability of the Shares; Escrow.

(a) Purchaser hereby authorizes and directs the Secretary of the Company, or such other person designated by the Company from time to time, to transfer the Unreleased Shares as to which the Repurchase Option has been exercised from Purchaser to the Company.

(b) To insure the availability for delivery of Purchaser's Unreleased Shares upon repurchase by the Company pursuant to the Repurchase Option under Section 3, Purchaser hereby appoints the Secretary, or any other person designated by the Company from time to time as escrow agent, as its attorney-in-fact to sell, assign and transfer unto the Company, such Unreleased Shares, if any, repurchased by the Company pursuant to the Repurchase Option and shall, upon execution of this Agreement, deliver and deposit with the Secretary of the Company, or such other person designated by the Company from time to time, the share certificate(s) representing the Unreleased Shares, together with the stock assignment duly endorsed in blank, attached hereto as Exhibit B. The Unreleased Shares and stock assignment shall be held by the Secretary, or such other person designated by the Company from time to time, in escrow, pursuant to the Joint Escrow Instructions of the Company and Purchaser attached as Exhibit C hereto, until the Company exercises its Repurchase Option as provided in Section 3, until such Unreleased Shares are vested, or until such time as the Repurchase Option no longer is in effect. As a further condition to the Company's obligations under this Agreement, the spouse of Purchaser, if any, shall execute and deliver to the Company the Consent of Spouse attached hereto as Exhibit D. Upon vesting of the Unreleased Shares, the escrow agent shall promptly deliver to Purchaser the certificate or certificates representing such Shares in the escrow agent's possession belonging to Purchaser, and the escrow agent shall be discharged of all further obligations hereunder; provided, however, that the escrow agent shall nevertheless retain such certificate or certificates as escrow agent if so required pursuant to other restrictions imposed pursuant to this Agreement.

(c) The Company, or its designee, shall not be liable for any act it may do or omit to do with respect to holding the Shares in escrow and while acting in good faith and in the exercise of its judgment.

(d) Transfer or sale of the Shares is subject to restrictions on transfer imposed by Section 5 of this Agreement and any applicable state and federal securities laws. Any transferee shall hold such Shares subject to all of the provisions hereof and shall acknowledge the same by signing a copy of this Agreement. Any transfer or attempted transfer of any of the Shares not in accordance with the terms of this Agreement shall be void and the Company may enforce the terms of this Agreement by stop transfer instructions or similar actions by the Company and its agents or designees.

5. Purchaser's Rights to Transfer Shares.

(a) Company's Right of First Refusal. Before any Shares held by Purchaser or any permitted transferee (each, a "Holder") may be sold, pledged, assigned, hypothecated, transferred, or otherwise disposed of (each, a "Transfer"), the Company or its assignee(s) shall have a right of first refusal to purchase the Shares proposed to be Transferred on the terms and conditions set forth in this Section 5 (the "Right of First Refusal").

(i) Notice of Proposed Transfer. In the event any Holder desires to Transfer any Shares, the Holder shall deliver to the Company a written notice (the "Notice") stating: (w) the Holder's bona fide intention to sell or otherwise Transfer such Shares; (x) the name of each proposed purchaser or other transferee ("Proposed Transferee"); (y) the number of Shares to be Transferred to each Proposed Transferee; and (z) the bona fide cash price or other consideration for which the Holder proposes to Transfer the Shares (the "Offered Price"), and the Holder shall offer such Shares at the Offered Price to the Company or its assignee(s).

(ii) Exercise of Right of First Refusal. Within thirty (30) days after receipt of the Notice, the Company and/or its assignee(s) may elect in writing to purchase all, but not less than all, of the Shares proposed to be Transferred to any one or more of the Proposed Transferees. The purchase price shall be determined in accordance with Section 5(a)(iii) hereof.

(iii) Purchase Price. The purchase price ("Repurchase Price") for the Shares repurchased under this Section 5 shall be the Offered Price. If the Offered Price includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the Board in good faith.

(iv) Payment. Payment of the Repurchase Price shall be made, at the option of the Company or its assignee(s), in cash (by check), by cancellation of all or a portion of any outstanding indebtedness of the Holder to the Company (or, in the case of repurchase by an assignee, to the assignee), or by any combination thereof within thirty (30) days after receipt of the Notice or in the manner and at the times mutually agreed to by the Company and the Holder.

(v) Holder's Right to Transfer. If all of the Shares proposed in the Notice to be Transferred are not purchased by the Company and/or its assignee(s) as provided in this Section 5, then the Holder may sell or otherwise Transfer such Shares to that Proposed Transferee at the Offered Price or at a higher price, provided that such sale or other Transfer is consummated within one hundred twenty (120) days after the date of the Notice and provided further that any such sale or other Transfer is effected in accordance with any applicable securities laws and the Proposed Transferee agrees in writing that the provisions of this Section 5 and the Restricted Stock Purchase Agreement, if applicable, shall continue to apply to the Shares in the hands of such Proposed

Transferee. If the Shares described in the Notice are not Transferred to the Proposed Transferee within such 120-day period, a new Notice shall be given to the Company, and the Company and/or its assignees shall again be offered the Right of First Refusal as provided herein before any Shares held by the Holder may be sold or otherwise Transferred.

(b) Exception for Certain Family Transfers. Anything to the contrary contained in this Section 5 notwithstanding, the Transfer of any or all of the Shares during the Purchaser's lifetime or upon the Purchaser's death by will or intestacy to the Purchaser's Immediate Family or a trust for the benefit of the Purchaser's Immediate Family shall be exempt from the Right of First Refusal. As used herein, "Immediate Family" shall mean spouse, lineal descendant or antecedent, father, mother, brother or sister or stepchild (whether or not adopted). In such case, the transferee or other recipient shall receive and hold the Shares so Transferred subject to the provisions of this Agreement, and there shall be no further Transfer of such Shares except in accordance with the terms of this Section 5.

(c) Termination of Right of First Refusal. The Right of First Refusal shall terminate as to all Shares upon a sale of Common Stock of the Company to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act of 1933, as amended (a "Public Offering").

6. Ownership, Voting Rights, Duties. This Agreement shall not affect in any way the ownership, voting rights or other rights or duties of Purchaser, except as specifically provided herein.

7. Adjustment for Stock Split. All references to the number of Shares and the purchase price of the Shares in this Agreement shall be appropriately adjusted to reflect any stock split, stock dividend or other change in the Shares which may be made by the Company after the date of this Agreement.

8. Notices. Notices required hereunder shall be given in person or by registered mail to the address of Purchaser shown on the records of the Company, and to the Company at its principal executive office.

9. Survival of Terms. This Agreement shall apply to and bind Purchaser and the Company and their respective permitted assignees and transferees, heirs, legatees, executors, administrators and legal successors.

10. Section 83(b) Election for Unreleased Shares. Purchaser hereby acknowledges that he or she has been informed that, with respect to the purchase of Unreleased Shares, that unless an election is filed by Purchaser with the Internal Revenue Service and, if necessary, the proper state taxing authorities, within thirty (30) days of the purchase of the Shares, electing pursuant to Section 83(b) of the Code (and similar state tax provisions if applicable) to be taxed currently on any difference between the purchase price of the Shares and their Fair Market Value on the date of purchase, there will be a recognition of taxable income to the Purchaser, measured by the excess, if any, of the fair market value of the Shares, at the time the Company's Repurchase Option lapses over the purchase price for the Shares. Purchaser represents that Purchaser has consulted any tax consultant(s) Purchaser deems advisable in connection with the purchase of the Shares or the filing of the Election under Section 83(b) and similar tax provisions.

PURCHASER ACKNOWLEDGES THAT IT IS PURCHASER'S SOLE RESPONSIBILITY AND NOT THE COMPANY'S TO FILE TIMELY THE ELECTION UNDER SECTION 83(b), EVEN IF PURCHASER REQUESTS THE COMPANY OR ITS REPRESENTATIVE TO MAKE THIS FILING ON PURCHASER'S BEHALF.

11. Representations. Purchaser has reviewed with his or her own tax advisors the federal, state, local and foreign tax consequences of this investment and the transactions contemplated by this Agreement. Purchaser is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. Purchaser understands that Purchaser (and not the Company) shall be responsible for his or her own tax liability that may arise as a result of this investment or the transactions contemplated by this Agreement.

12. Restrictive Legends and Stop-Transfer Orders.

(a) Any share certificate(s) evidencing the Shares issued hereunder shall be endorsed with the following legends and any other legends that may be required by state or federal securities laws:

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO A RIGHT OF REPURCHASE IN FAVOR OF GRITSTONE ONCOLOGY, INC. (THE "COMPANY") AND MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF A RESTRICTED STOCK PURCHASE AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO, OR IN CONNECTION WITH, THE SALE OR DISTRIBUTION THEREOF. NO SUCH SALE OR DISTRIBUTION MAY BE EFFECTED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL IN A FORM SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT.

(b) Purchaser agrees that, in order to ensure compliance with the restrictions referred to herein, the Company may issue appropriate “stop transfer” instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

(c) The Company shall not be required: (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Agreement, or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such Shares shall have been so transferred.

13. Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

14. Conformity to Securities Laws. Purchaser acknowledges that the Plan is intended to conform to the extent necessary with all provisions of the Securities Act and the Exchange Act and any and all regulations and rules promulgated by the Securities and Exchange Commission thereunder, and state securities laws and regulations. Notwithstanding anything herein to the contrary, the Plan shall be administered, and the Shares are to be issued, only in such a manner as to conform to such laws, rules and regulations. To the extent permitted by applicable law, the Plan and this Agreement shall be deemed amended to the extent necessary to conform to such laws, rules and regulations. Purchaser shall not transfer in any manner the Shares issued pursuant to this Agreement, without regard to whether such Shares are no longer subject to the Repurchase Option, unless (i) the transfer is pursuant to an effective registration statement under the Securities Act, or the rules and regulations in effect thereunder or (ii) counsel for the Company shall have reasonably concluded that no such registration is required because of the availability of an exemption from registration under the Securities Act.

15. Market Standoff Agreement. Purchaser hereby agrees that if so requested by the Company or any representative of the underwriters (the “Managing Underwriter”) in connection with any registration of the offering of any securities of the Company under the Securities Act, Purchaser shall not sell or otherwise transfer any Shares or other securities of the Company during the 180-day period (or such longer period as may be requested in writing by the Managing Underwriter and agreed to in writing by the Company) (the “Market Standoff Period”) following the effective date of a registration statement of the Company filed under the Securities Act; provided, however, that such restriction shall apply only to the first registration statement of the Company to become effective under the Securities Act that includes securities to be sold on behalf of the Company to the public in an underwritten public offering under the Securities Act. The Company may impose stop-transfer instructions with respect to securities subject to the foregoing restrictions until the end of such Market Standoff Period and these restrictions shall be binding on any transferee of such Shares. Notwithstanding the foregoing, the 180-day period may be extended for up to such number of additional days as is deemed necessary by the Company or the Managing Underwriter to continue coverage by research analysts in accordance with NASD Rule 2711 or any successor rule.

16. Further Instruments. Purchaser hereby agrees to execute such further instruments and to take such further action as may be reasonably necessary to carry out the purposes and intent of this Agreement including, without limitation, the Investment Representation Statement, in the form attached to the Grant Notice as Exhibit E.

17. Governing Law; Severability. This Agreement shall be governed by and construed in accordance with the laws of the State of California excluding that body of law pertaining to conflicts of law. Should any provision of this Agreement be determined by a court of law to be illegal or unenforceable, the other provisions shall nevertheless remain effective and shall remain enforceable.

18. Rules Particular To Specific Countries.

(a) Generally. Generally, Purchaser shall, if required by the Administrator, enter into an election with the Company or a Subsidiary (in a form approved by the Company) under which any liability to the Company's (or a Subsidiary's) Tax Liability, including, but not limited to, National Insurance Contributions ("NICs") and Fringe Benefit Tax ("FBT"), is transferred to and met by Purchaser. For purposes of this Section 18, Tax Liability shall mean any and all liability under applicable non-U.S. laws, rules or regulations from any income tax, the Company's (or a Subsidiary's) NICs, FBT or similar liability and the Optionee's NICs, FBT or similar liability under non-U.S. laws that are attributable to: (A) the grant of, or any other benefit derived by the Purchaser from the Shares; (B) the acquisition by Purchaser of the Shares; or (C) the disposal of any Shares acquired.

(b) Tax Indemnity. Purchaser shall indemnify and keep indemnified the Company and any of its Subsidiaries from and against any Tax Liability.

* * * * *

EXHIBIT B

ASSIGNMENT SEPARATE FROM CERTIFICATE

FOR VALUE RECEIVED I, _____, hereby sell, assign and transfer unto (_____) shares of the Common Stock of Gritstone Oncology, Inc. registered in my name on the books of said corporation represented by Certificate No. _____ herewith and do hereby irrevocably constitute and appoint to transfer the said stock on the books of the within named corporation with full power of substitution in the premises.

This Assignment Separate from Certificate may be used only in accordance with the Restricted Stock Purchase Agreement between Gritstone Oncology, Inc. and the undersigned dated _____, _____.

Dated: _____, _____

Signature: _____

INSTRUCTIONS: Please do not fill in any blanks other than the signature line. The purpose of this assignment is to enable the Company to exercise the Repurchase Option, as set forth in the Restricted Stock Purchase Agreement, without requiring additional signatures on the part of Purchaser.

EXHIBIT C

JOINT ESCROW INSTRUCTIONS

Secretary
Gritstone Oncology, Inc.

As Escrow Agent for both Gritstone Oncology, Inc. (the "Company") and the undersigned purchaser of stock of the Company (the "Purchaser"), you are hereby authorized and directed to hold the documents delivered to you pursuant to the terms of that certain Restricted Stock Purchase Agreement ("Agreement") between the Company and the undersigned, in accordance with the following instructions:

1. In the event the Company or any entitled parties (referred to collectively for convenience herein as the "Company") exercises the Company's Repurchase Option set forth in the Agreement, the Company shall give to Purchaser and you a written notice specifying the number of shares of stock to be purchased, the purchase price, and the time for a closing hereunder at the principal office of the Company. Purchaser and the Company hereby irrevocably authorize and direct you to close the transaction contemplated by such notice in accordance with the terms of said notice.

2. At the closing, you are directed (a) to date the stock assignments necessary for the transfer in question, (b) to fill in the number of shares being transferred, and (c) to deliver the same, together with the certificate evidencing the shares of stock to be transferred, to the Company or its assignee, against the simultaneous delivery to you of the purchase price (by cash, a check, or a combination thereof) for the number of shares of stock being purchased pursuant to the exercise of the Company's Repurchase Option.

3. Purchaser irrevocably authorizes the Company to deposit with you any certificates evidencing shares of stock to be held by you hereunder and any additions and substitutions to said shares as defined in the Agreement. Purchaser does hereby irrevocably constitute and appoint you as Purchaser's attorney-in-fact and agent for the term of this escrow to execute, with respect to such securities, all documents necessary or appropriate to make such securities negotiable and to complete any transaction herein contemplated, including but not limited to the filing with any applicable state blue sky authority of any required applications for consent to, or notice of transfer of, the securities. Subject to the provisions of this paragraph 3 and to the terms of the Agreement, Purchaser shall exercise all rights and privileges of a stockholder of the Company while the stock is held by you.

4. Upon written request of Purchaser, but no more than once per calendar year, unless the Company's Repurchase Option has been exercised, you will deliver to Purchaser a certificate or certificates representing the number of shares of stock as are not then subject to the Company's Repurchase Option. Within one hundred twenty (120) days after Purchaser ceases to be a Service Provider, you will deliver to Purchaser a certificate or certificates representing the aggregate number of shares held or issued pursuant to the Agreement and not purchased by the Company or any other entitled parties pursuant to exercise of the Company's Repurchase Option.

5. If at the time of termination of this escrow you should have in your possession any documents, securities, or other property belonging to Purchaser, you shall deliver all of the same to Purchaser and shall be discharged of all further obligations hereunder.

6. Your duties hereunder may be altered, amended, modified or revoked only by a writing signed by all of the parties hereto.

7. You shall be obligated only for the performance of such duties as are specifically set forth herein and may rely and shall be protected in relying or refraining from acting on any instrument reasonably believed by you to be genuine and to have been signed or presented by the proper party or parties. You shall not be personally liable for any act you may do or omit to do hereunder as Escrow Agent or as attorney-in-fact for Purchaser while acting in good faith, and any act done or omitted by you pursuant to the advice of your own attorneys shall be conclusive evidence of such good faith.

8. You are hereby expressly authorized to disregard any and all warnings given by any of the parties hereto or by any other person or corporation, excepting only orders or process of courts of law and are hereby expressly authorized to comply with and obey orders, judgments or decrees of any court. In case you obey or comply with any such order, judgment or decree, you shall not be liable to any of the parties hereto or to any other person, firm or corporation by reason of such compliance, notwithstanding any such order, judgment or decree being subsequently reversed, modified, annulled, set aside, vacated or found to have been entered without jurisdiction.

9. You shall not be liable in any respect on account of the identity, authorities or rights of the parties executing or delivering or purporting to execute or deliver the Agreement or any documents or papers deposited or called for hereunder.

10. You shall not be liable for the expiration of any rights under any applicable state, federal or local statute of limitations or similar statute or regulation with respect to these Joint Escrow Instructions or any documents deposited with you.

11. You shall be entitled to employ such legal counsel and other experts as you may deem necessary properly to advise you in connection with your obligations hereunder, may rely upon the advice of such counsel, and may pay such counsel reasonable compensation therefor.

12. Your responsibilities as Escrow Agent hereunder shall terminate if you shall cease to be an officer or agent of the Company or if you shall resign by written notice to each party. In the event of any such termination, the Company shall appoint a successor Escrow Agent.

13. If you reasonably require other or further instruments in connection with these Joint Escrow Instructions or obligations in respect hereto, the necessary parties hereto shall join in furnishing such instruments.

14. It is understood and agreed that should any dispute arise with respect to the delivery and/or ownership or right of possession of the securities held by you hereunder, you are authorized and directed to retain in your possession without liability to anyone all or any part of said securities until such disputes shall have been settled either by mutual written agreement of the parties concerned or by a final order, decree or judgment of a court of competent jurisdiction after the time for appeal has expired and no appeal has been perfected, but you shall be under no duty whatsoever to institute or defend any such proceedings.

15. Any notice required or permitted hereunder shall be given in writing and shall be deemed effectively given upon personal delivery or upon deposit in the United States Post Office, by registered or certified mail with postage and fees prepaid, addressed to each of the other parties thereunto entitled at such addresses as a party may designate by written notice to each of the other parties hereto.

16. By signing these Joint Escrow Instructions, you become a party hereto only for the purpose of said Joint Escrow Instructions; you do not become a party to the Agreement.

17. This instrument shall be binding upon and inure to the benefit of the parties hereto, and their respective successors and permitted assigns.

18. These Joint Escrow Instructions shall be governed by, and construed and enforced in accordance with, the laws of the State of California, excluding that body of law pertaining to conflicts of law.

(Signature Page Follows)

IN WITNESS WHEREOF, these Joint Escrow Instructions shall be effective as of the date first set forth above.

GRITSTONE ONCOLOGY, INC.

By: _____
Name: _____
Title: _____

PURCHASER

By: _____
Name: _____

Address: _____

ESCROW AGENT

By: _____
Name: _____
Title: _____

EXHIBIT D

CONSENT OF SPOUSE

I, _____, spouse of _____, have read and approve the Restricted Stock Purchase Agreement dated _____, between my spouse and Gritstone Oncology, Inc. In consideration of granting of the right to my spouse to purchase shares of Gritstone Oncology, Inc. set forth in the Restricted Stock Purchase Agreement, I hereby appoint my spouse as my attorney-in-fact in respect to the exercise of any rights under the Agreement and agree to be bound by the provisions of the Restricted Stock Purchase Agreement insofar as I may have any rights in said Restricted Stock Purchase Agreement or any shares issued pursuant thereto under the community property laws or similar laws relating to marital property in effect in the state of our residence as of the date of the signing of the foregoing Restricted Stock Purchase Agreement.

Dated: _____, _____

Signature of Spouse

EXHIBIT E

INVESTMENT REPRESENTATION STATEMENT

PURCHASER : _____
COMPANY : Gritstone Oncology, Inc.
SECURITY : Common Stock
AMOUNT : _____
DATE : _____

In connection with the purchase of the above-listed shares of Common Stock (the "Securities") of Gritstone Oncology, Inc., a Delaware corporation (the "Company"), the undersigned ("Purchaser") represents to the Company the following:

1. Purchaser is aware of the Company's business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. Purchaser is acquiring these Securities for investment for Purchaser's own account only and not with a view to, or for resale in connection with, any "distribution" thereof within the meaning of the Securities Act of 1933, as amended (the "Securities Act").

2. Purchaser acknowledges and understands that the Securities constitute "restricted securities" under the Securities Act and have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Purchaser's investment intent as expressed herein. Purchaser understands that, in the view of the Securities and Exchange Commission, the statutory basis for such exemption may be unavailable if Purchaser's representation was predicated solely upon a present intention to hold these Securities for the minimum capital gains period specified under tax statutes, for a deferred sale, for or until an increase or decrease in the market price of the Securities, or for a period of one year or any other fixed period in the future. Purchaser further understands that the Securities must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. Purchaser further acknowledges and understands that the Company is under no obligation to register the Securities. Purchaser understands that the certificate evidencing the Securities will be imprinted with a legend which prohibits the transfer of the Securities unless they are registered or such registration is not required in the opinion of counsel satisfactory to the Company and any other legend required under applicable state securities laws or agreements.

3. Purchaser is familiar with the provisions of Rule 701 and Rule 144, each promulgated under the Securities Act, which, in substance, permit limited public resale of "restricted securities" acquired, directly or indirectly from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions. Rule 701 provides that if the issuer

qualifies under Rule 701 at the time of the grant of the Stock Purchase Right to the Purchaser, the exercise will be exempt from registration under the Securities Act. In the event the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), ninety (90) days thereafter (or such longer period as any market stand-off agreement may require) the Securities exempt under Rule 701 may under present law be resold, subject to the satisfaction of certain of the conditions specified by Rule 144, including: (1) the resale being made through a broker in an unsolicited "broker's transaction" or in transactions directly with a market maker (as said term is defined under the Exchange Act); and, in the case of an affiliate, (2) the availability of certain public information about the Company, (3) the amount of Securities being sold during any three (3) month period not exceeding the limitations specified in Rule 144(e), and (4) the timely filing of a Form 144, if applicable.

In the event that the Company does not qualify under Rule 701 at the time of grant of the Stock Purchase Right, then the Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which requires the resale to occur not less than six months, or, in the event the Company is not subject to the reporting requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, not less than one year, after the later of the date the Securities were sold by the Company or the date the Securities were sold by an affiliate of the Company, within the meaning of Rule 144; and, in the case of acquisition of the Securities by an affiliate, the satisfaction of the conditions set forth in sections (1), (2), (3) and (4) of the paragraph immediately above or, in the case of a non-affiliate who subsequently holds the Securities less than one year, the satisfaction of the conditions set forth in section (2) of the paragraph immediately above..

4. Purchaser further understands that in the event all of the applicable requirements of Rule 701 or 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required; and that, notwithstanding the fact that Rules 144 and 701 are not exclusive, the Staff of the Securities and Exchange Commission has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rules 144 or 701 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk. Purchaser understands that no assurances can be given that any such other registration exemption will be available in such event.

Signature of Purchaser:

Purchaser

Date: _____, _____

FORM OF 83(B) ELECTION AND INSTRUCTIONS

These instructions are provided to assist you if you choose to make an election under Section 83(b) of the Internal Revenue Code, as amended, with respect to the shares of common stock of Gritstone Oncology, Inc. transferred to you. **Please consult with your personal tax advisor as to whether an election of this nature will be in your best interests in light of your personal tax situation.**

The executed original of the Section 83(b) election must be filed with the Internal Revenue Service not later than 30 days after the date the shares were transferred to you. PLEASE NOTE: There is no remedy for failure to file on time. The steps outlined below should be followed to ensure the election is mailed and filed correctly and in a timely manner. ALSO, PLEASE NOTE: If you make the Section 83(b) election, the election is irrevocable.

Complete Section 83(b) election form (attached as Attachment 1) and make four (4) copies of the signed election form. (Your spouse, if any, should sign the Section 83(b) election form as well.)

Prepare the cover letter to the Internal Revenue Service (sample letter attached as Attachment 2).

Send the cover letter with the originally executed Section 83(b) election form and one (1) copy via certified mail, return receipt requested to the Internal Revenue Service at the address of the Internal Revenue Service where you file your personal tax returns. We suggest that you have the package date-stamped at the post office. The post office will provide you with a certified receipt that includes a dated postmark. Enclose a self-addressed, stamped envelope so that the Internal Revenue Service may return a date-stamped copy to you. However, your postmarked receipt is your proof of having timely filed the Section 83(b) election if you do not receive confirmation from the Internal Revenue Service.

One (1) copy must be sent to Gritstone Oncology, Inc. for its records and **one (1) copy must be attached to your federal income tax return for the applicable calendar year.**

Retain the Internal Revenue Service file stamped copy (when returned) for your records.

Please consult your personal tax advisor for the address of the office of the Internal Revenue Service to which you should mail your election form.

ATTACHMENT 1

ELECTION UNDER INTERNAL REVENUE CODE SECTION 83(B)

The undersigned taxpayer hereby elects, pursuant to Section 83(b) of the Internal Revenue Code of 1986, as amended, to include in taxpayer's gross income for the current taxable year the amount of any compensation taxable to taxpayer in connection with taxpayer's receipt of shares (the "Shares") of Common Stock of Gritstone Oncology, Inc., a Delaware corporation (the "Company").

The name, address and taxpayer identification number of the undersigned taxpayer are:

SSN: _____

The name, address and taxpayer identification number of the Taxpayer's spouse are (complete if applicable):

SSN: _____

Description of the property with respect to which the election is being made:

() shares of Common Stock of the Company.

The date on which the property was transferred was . The taxable year to which this election relates is calendar year .

Nature of restrictions to which the property is subject:

The Shares are subject to repurchase by the Company or its assignee upon the occurrence of certain events. This repurchase right lapses based upon the continued performance of services by the taxpayer over time.

The fair market value at the time of transfer (determined without regard to any lapse restrictions, as defined in Treasury Regulation Section 1.83-3(i)) of the Shares was \$ per Share.

The amount paid by the taxpayer for Shares was per share.

A copy of this statement has been furnished to the Company.

Dated: _____, _____ Taxpayer Signature _____

The undersigned spouse of Taxpayer joins in this election. (Complete if applicable).

Dated: _____, ____

Spouse's Signature _____

Signature(s) Notarized by:

ATTACHMENT 2
SAMPLE COVER LETTER TO INTERNAL REVENUE SERVICE

_____, _____
VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Internal Revenue Service
[Address where taxpayer files returns]

Re: Election under Section 83(b) of the Internal Revenue Code of 1986
Taxpayer: _____
Taxpayer's Social Security Number: _____
Taxpayer's Spouse: _____
Taxpayer's Spouse's Social Security Number: _____

Ladies and Gentlemen:

Enclosed please find an original and one copy of an Election under Section 83(b) of the Internal Revenue Code of 1986, as amended, being made by the taxpayer referenced above. Please acknowledge receipt of the enclosed materials by stamping the enclosed copy of the Election and returning it to me in the self-addressed stamped envelope provided herewith.

Very truly yours,

Enclosures

cc: Gritstone Oncology, Inc.

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the captions “Experts” and “Risk Factors” and to the use of our report dated May 4, 2018, in the Registration Statement (Form S-1) and related Prospectus of Gritstone Oncology, Inc. dated August 23, 2018.

/s/ Ernst & Young LLP

Redwood City, California
August 23, 2018