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

Form 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended September 30, 2022

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to

Commission file number: 001-38663

Gritstone bio, Inc.
(Exact Name of Registrant as Specified in its Charter)

Delaware	**47-4859534**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**
5959 Horton Street, Suite 300 Emeryville, California	**94608**
(Address of Principal Executive Offices)	**(Zip Code)**

(510) 871-6100
(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.0001 par value per share	**GRTS**	**The Nasdaq Global Select Market**

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth 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	☐	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 pursuant to Section 13(a) of the Exchange Act. ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of November 1, 2022, there were 83,366,277 shares of the registrant's common stock, par value $0.0001 per share, outstanding.

Gritstone bio, Inc.
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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

Gritstone bio, Inc.
Condensed Consolidated Balance Sheets
(Unaudited)
(In thousands, except share amounts and par value)

	September 30, 2022	December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 64,909	$ 93,287
Marketable securities	74,900	108,346
Restricted cash	6,727	11,285
Prepaid expenses and other current assets	6,891	7,672
Total current assets	153,427	220,590
Long-term restricted cash	5,290	6,005
Property and equipment, net	21,672	21,622
Lease right-of-use assets	19,321	22,920
Deposits and other long-term assets	5,532	2,352
Long-term marketable securities	—	4,617
Total assets	$ 205,242	$ 278,106
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 2,885	$ 4,230
Accrued compensation	6,708	6,925
Accrued liabilities	2,670	411
Accrued research and development expenses	5,037	3,706
Lease liabilities, current portion	6,325	7,483
Deferred revenue, current portion	8,688	17,201
Total current liabilities	32,313	39,956
Other liabilities, noncurrent	49	—
Lease liabilities, net of current portion	16,752	18,936
Deferred revenue, net of current portion	—	3,128
Debt, noncurrent	19,281	—
Total liabilities	68,395	62,020
Commitments and contingencies (Notes 6, 8, and 9)		
Stockholders' equity:		
Preferred stock, $0.0001 par value; 10,000,000 shares authorized; no shares issued and outstanding at September 30, 2022 and December 31, 2021	—	—
Common stock, $0.0001 par value; 300,000,000 shares authorized at September 30, 2022 and December 31, 2021; 73,134,051 and 69,047,878 shares issued and outstanding at September 30, 2022 and December 31, 2021, respectively	20	20
Additional paid-in capital	626,889	617,523
Accumulated other comprehensive loss	(281)	(73)
Accumulated deficit	(489,781)	(401,384)
Total stockholders' equity	136,847	216,086
Total liabilities and stockholders' equity	$ 205,242	$ 278,106

See accompanying notes to the unaudited condensed consolidated financial statements.

Gritstone bio, Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(Unaudited)
(In thousands, except share and per share amounts)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Revenues:				
Collaboration and license revenues	$ 436	$ 2,401	$ 7,942	$ 44,937
Grant revenues	2,585	213	7,741	213
Total revenues	3,021	2,614	15,683	45,150
Operating expenses:				
Research and development	26,436	24,396	81,983	71,324
General and administrative	6,462	6,373	22,209	19,251
Total operating expenses	32,898	30,769	104,192	90,575
Loss from operations	(29,877)	(28,155)	(88,509)	(45,425)
Interest income	462	37	663	112
Interest expense	(551)	—	(551)	—
Net loss	(29,966)	(28,118)	(88,397)	(45,313)
Other comprehensive gain (loss):				
Unrealized gain (loss) on marketable securities	129	(7)	(208)	7
Comprehensive loss	$ (29,837)	$ (28,125)	$ (88,605)	$ (45,306)
Net loss per share, basic and diluted	$ (0.35)	$ (0.36)	$ (1.02)	$ (0.59)
Weighted-average number of shares used in computing net loss per share, basic and diluted	86,597,405	77,775,497	86,441,212	76,837,503

See accompanying notes to the unaudited condensed consolidated financial statements.

Gritstone bio, Inc.
Condensed Consolidated Statements of Stockholders' Equity
(Unaudited)
(In thousands, except share amounts)

Three Months Ended September 30, 2022:

	Common Stock		Additional Paid-In	Accumulated Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Gain (Loss)	Deficit	Equity
Balance at June 30, 2022	73,006,089	$ 20	$ 623,583	$ (410)	$ (459,815)	$ 163,378
Issuance of common stock under the ATM equity offering program, net of issuance costs of $48	95,000	—	197	—	—	197
Issuance of common stock upon exercise of stock options	32,962	—	45	—	—	45
Stock-based compensation	—	—	3,064	—	—	3,064
Unrealized gain on marketable securities	—	—	—	129	—	129
Net loss	—	—	—	—	(29,966)	(29,966)
Balance at September 30, 2022	73,134,051	$ 20	$ 626,889	$ (281)	$ (489,781)	$ 136,847

Three Months Ended September 30, 2021:

	Common Stock		Additional Paid-In	Accumulated Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Gain (Loss)	Deficit	Equity
Balance at June 30, 2021	49,433,361	$ 18	$ 522,290	$ 14	$ (343,497)	$ 178,825
Issuance of common stock under the ATM equity offering program, net of issuance costs of $49	55,062	—	602	—	—	602
Issuance of common stock under private investment in public entity ("PIPE") financing, net of issuance costs of $2,269	5,000,000	1	52,731	—	—	52,732
Issuance of common stock for warrant exercises	9,555,876	1	39	—	—	40
Issuance of common stock upon exercise of stock options	207,282	—	1,062	—	—	1,062
Stock-based compensation	—	—	2,819	—	—	2,819
Unrealized loss on marketable securities	—	—	—	(7)	—	(7)
Net loss	—	—	—	—	(28,118)	(28,118)
Balance at September 30, 2021	64,251,581	$ 20	$ 579,543	$ 7	$ (371,615)	$ 207,955

Continued on next page.

See accompanying notes to the unaudited condensed consolidated financial statements.

Gritstone bio, Inc.
Condensed Consolidated Statements of Stockholders' Equity
(Unaudited)
(In thousands, except share amounts)

Nine Months Ended September 30, 2022:

	Common Stock		Additional Paid-In	Accumulated Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Gain (Loss)	Deficit	Equity
Balance at December 31, 2021	69,047,878	$ 20	$ 617,523	$ (73)	$ (401,384)	$ 216,086
Issuance of common stock under the ATM equity offering program, net of issuance costs of $48	95,000	—	197	—	—	197
Issuance of common stock for warrant exercises	3,442,567	—	34	—	—	34
Issuance of common stock upon restricted stock units vesting	215,350	—	—	—	—	—
Tax payments related to shares withheld for vested restricted stock units	—	—	(890)	—	—	(890)
Issuance of common stock upon exercise of stock options	140,000	—	145	—	—	145
Issuance of common stock under the ESPP	193,256	—	331	—	—	331
Stock-based compensation	—	—	9,549	—	—	9,549
Unrealized loss on marketable securities	—	—	—	(208)	—	(208)
Net loss	—	—	—	—	(88,397)	(88,397)
Balance at September 30, 2022	73,134,051	$ 20	$ 626,889	$ (281)	$ (489,781)	$ 136,847

Nine Months Ended September 30, 2021:

	Common Stock		Additional Paid-In	Accumulated Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Gain (Loss)	Deficit	Equity
Balance at December 31, 2020	47,552,693	$ 18	$ 493,023	$ —	$ (326,302)	$ 166,739
Offering costs related to the sale of common stock and pre-funded warrants	—	—	(451)	—	—	(451)
Issuance of common stock under Sales Purchase Agreement, net of issuance costs of $339	1,169,591	—	20,830	—	—	20,830
Issuance of common stock under the ATM equity offering program, net of issuance costs of $80	225,165	—	2,231	—	—	2,231
Issuance of common stock under private investment in PIPE financing, net of issuance costs of $2,269	5,000,000	1	52,731	—	—	52,732
Issuance of common stock for warrant exercises	9,555,876	1	39	—	—	40
Issuance of common stock upon exercise of stock options	638,692	—	3,108	—	—	3,108
Issuance of common stock under the ESPP	109,564	—	279	—	—	279
Stock-based compensation	—	—	7,753	—	—	7,753
Unrealized gain on marketable securities	—	—	—	7	—	7
Net loss	—	—	—	—	(45,313)	(45,313)
Balance at September 30, 2021	64,251,581	$ 20	$ 579,543	$ 7	$ (371,615)	$ 207,955

See accompanying notes to the unaudited condensed consolidated financial statements.

Gritstone bio, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)
(In thousands)

	Nine Months Ended September 30,	
	2022	2021
Operating activities		
Net loss	$ (88,397)	$ (45,313)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	4,769	4,782
Net amortization of premiums and discounts on marketable securities	278	549
Amortization of debt discount and issuance costs	127	—
Stock-based compensation	9,549	7,753
Non-cash operating lease expense	6,891	5,743
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	781	(3,484)
Deposits and other long-term assets	(3,180)	(327)
Accounts payable	(943)	(942)
Accrued compensation	(217)	(216)
Accrued and other non-current liabilities	1,543	106
Accrued research and development expenses	1,331	1,487
Lease liability	(6,463)	(5,902)
Deferred revenue	(11,641)	8,865
Net cash used in operating activities	(85,572)	(26,899)
Investing activities		
Purchase of marketable securities	(64,641)	(133,409)
Maturities of marketable securities	102,218	59,390
Sales of marketable securities	—	6,225
Purchase of property and equipment	(4,389)	(4,133)
Net cash provided by (used in) investing activities	33,188	(71,927)
Financing activities		
Proceeds from issuance of common stock from public offering	—	21,170
Proceeds from issuance of common stock from PIPE financing	—	55,000
Proceeds from issuance of common stock upon exercise of stock options, warrants, and other	179	3,148
Proceeds from issuance of common stock under the ATM equity offering program	245	2,312
Proceeds from issuance of common stock under the ESPP	331	279
Proceeds from long-term debt, net of debt discount and issuance costs	19,154	—
Payments of financing costs	(115)	(6,026)
Payments of financing lease	(171)	—
Tax payments related to shares withheld for vested restricted stock units	(890)	—
Net cash provided by financing activities	18,733	75,883
Net decrease in cash, cash equivalents and restricted cash	(33,651)	(22,943)
Cash, cash equivalents and restricted cash at beginning of period	110,577	171,048
Cash, cash equivalents and restricted cash at end of period	$ 76,926	$ 148,105
Supplemental disclosures of non-cash investing and financing information		
Property and equipment purchases accrued but not yet paid	$ 1,174	$ 199
Financing costs included in accrued liabilities and accounts payable	$ 2	$ 2,313
Lease liabilities arising from obtaining right-of-use asset from new leases	$ 553	$ 109
Remeasurement of operating lease right-of-use asset for lease modification	$ 1,406	$ 6,453
Cash paid for interest on debt	$ 208	$ —

See accompanying notes to the unaudited condensed consolidated financial statements.

1. Organization

Description of Business

Gritstone bio, Inc. ("Gritstone" or the "Company") is a clinical-stage biotechnology company developing next generation vaccines for solid tumors and viral diseases. The Company was incorporated in the state of Delaware in August 2015 and is headquartered in Emeryville, California with a site in Cambridge, Massachusetts and a manufacturing facility in Pleasanton, California. The Company operates in one segment.

Liquidity

The Company has incurred operating losses and has an accumulated deficit as a result of ongoing efforts to develop drug product candidates, including conducting preclinical and clinical trials and providing general and administrative support for these operations. The Company had net losses of $30.0 million and $88.4 million for the three and nine months ended September 30, 2022, respectively, and $28.1 million and $45.3 million for the three and nine months ended September 30, 2021, respectively. During the nine months ended September 30, 2022, cash used by operating activities was $85.6 million. During the nine months ended September 30, 2021, cash used by operating activities was $26.9 million. The Company had an accumulated deficit of $489.8 million and $401.4 million as of September 30, 2022 and December 31, 2021, respectively. To date, none of the Company's product candidates have been approved for sale and, therefore the Company has not generated any revenue from sales of commercial products. Management expects operating losses to continue for the foreseeable future. The Company has funded its operations to date primarily through private placements of its convertible preferred stock, the sale of common stock in public offerings and under its "at-the-market" offering programs, the private placement of common stock and pre-funded warrants, and through proceeds received from its collaboration arrangements. As of September 30, 2022, the Company had cash, cash equivalents and marketable securities of $139.8 million, which the Company believes will be sufficient to fund its planned operations for a period of at least twelve months following the filing date of this report.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying interim condensed consolidated financial statements are unaudited and are comprised of the consolidation of the Company and its wholly-owned subsidiary. All intercompany balances and transactions have been eliminated in consolidation. The Company has no unconsolidated subsidiaries or investments accounted for under the equity method.

The accompanying interim condensed consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles ("U.S. GAAP") and the rules and regulations of the Securities and Exchange Commission (the "SEC") for interim reporting.

The interim condensed consolidated financial statements are unaudited and, in the opinion of management, reflect all adjustments, consisting only of normal recurring adjustments, necessary for the fair presentation for interim reporting. The results of operations for any interim period are not necessarily indicative of results of operations for any future period.

Certain information and footnote disclosures typically included in annual financial statements prepared in accordance with U.S. GAAP have been condensed or omitted. Accordingly, these unaudited interim condensed consolidated financial statements should be read in conjunction with the Company's audited financial statements as of and for the year ended December 31, 2021, which are included in the Company's Annual Report on Form 10-K, as filed with the SEC on March 10, 2022, as amended by Amendment No 1. to the Company's Annual Report on Form 10-K/A, as filed with the SEC on May 3, 2022.

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 liabilities as of the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. 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.

Fair Value of Financial Instruments

U.S. GAAP 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.

Fair value is established 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, an established three-tier fair value hierarchy 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 condensed consolidated 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.

Concentrations of Credit Risk

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 condensed consolidated balance sheets. As of September 30, 2022, the Company has no off-balance sheet concentrations of credit risk.

Other Risks and Uncertainties

The Company is subject to a number of risks similar to those of other clinical-stage biotechnology 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. Further, the Company is subject to broad market risks and uncertainties resulting from recent events, such as the COVID-19 pandemic, the Russian invasion of Ukraine, inflation, rising interest rates, and recession risks as well as supply chain and labor shortages.

Cash, Cash Equivalents and Restricted Cash

Cash equivalents, which consist primarily of highly liquid investments with original maturities of three (3) months or less when purchased, are stated at 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 letters of credit under certain lease agreements that have been collateralized by cash deposits for an equal amount and are recorded within short-term restricted cash and deposits and other long-term assets on the condensed consolidated balance sheets based on the term of the underlying lease. Additionally, the Company's restricted cash includes payments received under the Coalition for Epidemic Preparedness Innovations ("CEPI") Funding Agreement, dated as of August 14, 2021 (the "CEPI Funding Agreement") and the Gates Foundation Grant Agreement (see Note 9). The Company will utilize the CEPI and Gates Foundation funds as it incurs expenses for services performed under the agreements.

The following table provides a reconciliation of cash, cash equivalents and short-term and long-term restricted cash reported within the condensed consolidated balance sheets that sum to the total of the same amounts shown in the condensed consolidated statements of cash flows (in thousands):

	September 30, 2022	December 31, 2021
Cash and cash equivalents	$ 64,909	$ 93,287
Restricted cash	6,727	11,285
Long-term restricted cash	5,290	6,005
Total cash, cash equivalents and restricted cash	$ 76,926	$ 110,577

Leases

The Company determines whether the arrangement is or contains a lease at the inception of the arrangement and if such a lease is classified as a financing lease or operating lease. The majority of the Company's leases are classified as operating leases. Leases with a term greater than one year are included in operating lease ROU Assets, lease liabilities, current portion, and lease liabilities, net of current portion in the Company's condensed consolidated balance sheets as of September 30, 2022 and December 31, 2021. The Company has elected not to recognize on the condensed consolidated balance sheets leases with terms of one year or less. Lease liabilities and their corresponding ROU Assets are recorded based on the present value of lease payments over the expected lease term. In determining the net present value of lease payments, the interest rate implicit in lease contracts is typically not readily determinable. As such, the Company estimates the appropriate incremental borrowing rate, which is the rate that would be incurred to borrow on a collateralized basis over a similar term an amount equal to the lease payments in a similar economic environment. Certain adjustments to the ROU Assets may be required for items such as initial direct costs paid or incentives received and impairment charges if we determine the ROU Asset is impaired.

The Company considers a lease term to be the non-cancelable period that it has the right to use the underlying asset, including any periods where it is reasonably assured the Company will exercise the option to extend the contract. Periods covered by an option to extend are included in the lease term if the lessor controls the exercise of that option.

The Company recognizes lease expense on a straight-line basis over the expected lease term.

The Company has elected not to separate lease and non-lease components for its leased assets and accounts for all lease and non-lease components of its agreements as a single lease component. The lease components resulting

in a ROU Asset have been recorded on the condensed consolidated balance sheets and amortized as lease expense on a straight-line basis over the lease term.

Debt Issuance Costs and Debt Discounts

Debt issuance costs include legal fees, accounting fees, and other direct costs incurred in connection with the execution of the Company's debt financing. Debt discounts represent costs paid to the lenders. Debt issuance costs and debt discounts are deducted from the carrying amount of the debt liability and are amortized to interest expense over the term of the related debt using the effective interest method.

Revenue Recognition

The Company performs research and development under collaboration, license, grant, and clinical development agreements. The Company's revenue primarily consists of collaboration agreements and grant agreements. At contract inception, the Company analyzes a revenue arrangement to determine the appropriate accounting under U.S. GAAP. Currently, the Company's revenue arrangements represent customer contracts within the scope of ASC Topic 606, Revenue from Contracts with Customers (Topic 606) ("ASC 606") or are subject to the contribution guidance in ASC Topic 958-605, Not-for-Profit Entities – Revenue Recognition ("ASC 958-605"), which applies to business entities that receive contributions within the scope of ASC 958-605.

For collaboration agreements, the Company analyzes to assess whether such arrangements involve joint operating activities performed by parties that are both active participants in the activities and exposed to significant risks and rewards dependent on the commercial success of such activities. This assessment is performed throughout the life of the arrangement based on changes in the responsibilities of all parties in the arrangement. For collaboration arrangements that are considered to be in the scope of the collaboration guidance and that contain multiple elements, the Company first determines which elements of the collaboration are deemed to be within the scope of the collaboration guidance and those that are more reflective of a vendor-customer relationship and, therefore, within the scope of the revenue with contracts with customers guidance. Elements of collaboration arrangements that are reflective of a vendor-customer relationship are accounted for pursuant to the revenue from contracts with customers guidance. The terms of the licensing and collaboration agreements entered into typically include payment of one or more of the following: non-refundable, up-front fees; development, regulatory, and commercial milestone payments; payments for manufacturing supply services; and royalties on net sales of licensed products. Each of these payments results in license, collaboration and other revenues, except for revenues from royalties on net sales of licensed products, which are classified as royalty revenues. The core principle of the accounting for revenue from contracts with customers guidance is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration that is expected to be received in exchange for those goods or services.

In determining the appropriate amount of revenue to be recognized as the Company fulfills its obligations under each of its agreements, the Company performs the following steps: (i) identification of the promised goods or services in the contract; (ii) determination of whether the promised goods or services are performance obligations, including whether they are distinct in the context of the contract; (iii) measurement of the transaction price, including the constraint on variable consideration; (iv) allocation of the transaction price to the performance obligations based on estimated selling prices; and (v) recognition of revenue when (or as) the Company satisfies each performance obligation.

Amounts received prior to satisfying the revenue recognition criteria are recorded as deferred revenue in the Company's condensed consolidated balance sheets. If the related performance obligation is expected to be satisfied within the next twelve (12) months, this will be classified in current liabilities. Amounts recognized as revenue prior to receipt are recorded as contract assets in the Company's condensed consolidated balance sheets. If the Company expects to have an unconditional right to receive consideration in the next twelve (12) months, this will be classified in current assets. A net contract asset or liability is presented for each contract with a customer.

At contract inception, the Company assesses the goods or services promised in a contract with a customer and identifies those distinct goods and services that represent a performance obligation. A promised good or service may not be identified as a performance obligation if it is immaterial in the context of the contract with the customer, if it is not separately identifiable from other promises in the contract (either because it is not capable of being separated or

because it is not separable in the context of the contract), or if the performance obligation does not provide the customer with a material right.

The Company considers the terms of the contract and its customary business practices to determine the transaction price. The transaction price is the amount of consideration to which the Company expects to be entitled in exchange for transferring promised goods or services to a customer. The consideration promised in a contract with a customer may include fixed amounts, variable amounts, or both. Variable consideration will only be included in the transaction price when it is not considered constrained, which is when it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur.

If it is determined that multiple performance obligations exist, the transaction price is allocated at the inception of the agreement to all identified performance obligations, based on the relative standalone selling prices. The relative selling price for each performance obligation is estimated using objective evidence if it is available. If objective evidence is not available, the Company uses its best estimate of the selling price for the performance obligation.

Revenue is recognized when, or as, the Company satisfies a performance obligation by transferring a promised good or service to a customer. An asset is transferred when, or as, the customer obtains control of that asset, which for a service is considered to be as the services are received and used. The Company recognizes revenue over time by measuring the progress toward complete satisfaction of the relevant performance obligation, using an appropriate input or output method based on the nature of the good or service promised to the customer.

After contract inception, the transaction price is reassessed at every period end and updated for changes, such as resolution of uncertain events. Any change in the transaction price is allocated to the performance obligations on the same basis as at contract inception.

Management may be required to exercise considerable judgment in estimating revenue to be recognized. Judgment is required in identifying performance obligations, estimating the transaction price, estimating the stand-alone selling prices of identified performance obligations (which may include forecasted revenue, development timelines, reimbursement rates for personnel costs, discount rates and probabilities of technical and regulatory success) and estimating the progress towards satisfaction of performance obligations.

For grant funding agreements, grant revenue is recognized during the period that the research and development services occur, as qualifying expenses are incurred. The Company concluded that payments received under these grants represent nonreciprocal contributions, as described in ASC Topic 958, Not-for-Profit Entities, and that the grants are not within the scope of ASC 606 as the organization providing the grant does not meet the definition of a customer. Grant revenue relates primarily to the CEPI and Gates Grant Agreements (see Note 9).

Income Taxes

On March 18, 2020, the Families First Coronavirus Response Act (the “FFCR Act”), and on March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act (the “CARES Act”) were each enacted in response to the COVID-19 pandemic. The FFCR Act and the CARES Act contain numerous income tax provisions relating to refundable payroll tax credits, deferment of employer side social security payments, net operating loss carryback periods, alternative minimum tax credit refunds, modifications to the net interest deduction limitations and technical corrections to tax depreciation methods for qualified improvement property.

On June 29, 2020, Assembly Bill 85 (“A.B. 85”) was signed into California law. A.B. 85 provides for a three-year suspension of the use of net operating losses for medium and large businesses and a three-year cap on the use of business incentive tax credits to offset no more than $5.0 million of tax per year. A.B. 85 suspends the use of net operating losses for taxable years 2020 and 2021 for certain taxpayers with taxable income of $1.0 million or more. The carryover period for any net operating losses that are suspended under this provision will be extended. A.B. 85 also requires that business incentive tax credits, including carryovers, may not reduce the applicable tax by more than $5.0 million for taxable years 2020 and 2021.

The FFCR Act, CARES Act and A.B. 85 did not have a material impact on the Company’s condensed consolidated financial statements as of September 30, 2022; however, the Company continues to examine the impacts the FFCR Act, CARES Act and A.B. 85 may have on its business, results of operations, financial condition, liquidity and related disclosures.

Recently Adopted Accounting Pronouncements

In October 2020, the FASB issued ASU No. 2020-10, *Codification Improvements* ("ASU 2020-10"). The standard contains improvements to the FASB Accounting Standards Codification (the "Codification") by ensuring that all guidance that requires or provides an option for an entity to provide information in the notes to financial statements is codified in the disclosure section of the Codification. The standard also improves various topics in the Codification so that entities can apply guidance more consistently on codifications that are varied in nature where the original guidance may have been unclear. The amendments in ASU 2020-10 are effective for the Company for fiscal years beginning after December 15, 2021, and interim periods within fiscal years beginning after December 15, 2022. Early adoption is permitted. We adopted ASU 2020-10 on January 1, 2022 and the adoption did not have a material impact on the Company's condensed consolidated financial statements and related disclosures.

Recently Issued Accounting Pronouncements Not Yet Adopted

In August 2020, the FASB issued ASU No. 2020-06, *Debt - Debt with Conversion and Other Options* (Subtopic 470-20) and *Derivatives and Hedging - Contracts in Entity's Own Equity* ("ASU 2020-06"). The standard eliminates the beneficial conversion and cash conversion accounting models for convertible instruments. It also amends the accounting for certain contracts in an entity's own equity that are currently accounted for as derivatives because of specific settlement provisions. In addition, the standard modifies how particular convertible instruments and certain contracts that may be settled in cash or shares impact the diluted EPS computation. The amendments in ASU 2020-06 are effective for the Company as defined by the SEC for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. Early adoption is permitted, but not earlier than fiscal years beginning after December 15, 2020. The Company does not expect the adoption of ASU 2020-06 to have a material impact on its condensed consolidated financial statements and related disclosures.

3. Cash Equivalents and Marketable Securities

The amortized costs, unrealized gains and losses and fair values of cash equivalents and marketable securities were as follows (in thousands):

	September 30, 2022			
Description	**Amortized Cost**	**Unrealized Gains**	**Unrealized Losses**	**Fair Value**
Cash equivalents:				
Money market funds	$ 39,915	$ —	$ —	$ 39,915
Commercial paper	1,990	—	—	1,990
Total cash equivalents	41,905	—	—	41,905
Short-term marketable securities:				
Certificates of deposit	3,750	—	(14)	3,736
Commercial paper	22,333	—	(31)	22,302
Corporate debt securities	11,239	—	(74)	11,165
U.S. treasuries	32,659	—	(153)	32,506
U.S. government debt securities	5,200	—	(9)	5,191
Total short-term marketable securities	75,181	—	(281)	74,900
Total	$ 117,086	$ —	$ (281)	$ 116,805

Description	December 31, 2021 Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Cash equivalents:				
Money market funds	$ 79,281	$ —	$ —	$ 79,281
Commercial paper	1,000	—	—	1,000
Corporate debt securities	1,031	—	—	1,031
Total cash equivalents	81,312	—	—	81,312
Short-term marketable securities:				
Certificates of deposit	5,600	—	(6)	5,594
Commercial paper	44,990	—	(16)	44,974
Corporate debt securities	26,976	—	(23)	26,953
U.S. treasuries	12,277	—	(8)	12,269
U.S. government debt securities	2,000	—	(1)	1,999
Asset backed securities	16,565	—	(8)	16,557
Total short-term marketable securities	108,408	—	(62)	108,346
Long-term marketable securities:				
Corporate debt securities	1,637	—	(6)	1,631
U.S. treasuries	2,991	—	(5)	2,986
Total long-term marketable securities	4,628	—	(11)	4,617
Total	$ 194,348	$ —	$ (73)	$ 194,275

All marketable securities held as of September 30, 2022 had contractual maturities of less than one year. There have been no material realized gains or losses on marketable securities for the periods presented. As of September 30, 2022, the Company did not hold any individual securities in an unrealized loss position for 12 months or greater. The Company has the ability and intent to hold all marketable securities that have been in a continuous loss position until maturity or recovery. No significant facts or circumstances have arisen to indicate that there has been any significant deterioration in the creditworthiness of the issuers of the securities held by us. The Company considered the current and expected future economic and market conditions and determined that the estimate of credit losses was not significantly impacted. Thus, no credit loss existed as of or for the three and nine months ended September 30, 2022 or the three and nine months ended September 30, 2021. The Company will continue to assess the current and expected future economic and market conditions as further development arises.

See Note 4 for further information regarding the fair value of the Company's financial instruments.

4. Fair Value Measurements

The Company's financial assets subject to fair value measurements on a recurring basis and the level of inputs used in such measurements were as follows (in thousands):

Description	September 30, 2022 Total	Level 1	Level 2	Level 3
Cash equivalents:				
Money market funds	$ 39,915	$ 39,915	$ —	$ —
Commercial paper	1,990	—	1,990	—
Total cash equivalents	41,905	39,915	1,990	—
Short-term marketable securities:				
Certificates of deposit	3,736	—	3,736	—
Commercial paper	22,302	—	22,302	—
Corporate debt securities	11,165	—	11,165	—
U.S. treasuries	32,506	32,506	—	—
U.S. government debt securities	5,191	—	5,191	—
Total short-term marketable securities	74,900	32,506	42,394	—
Total	$ 116,805	$ 72,421	$ 44,384	$ —

Description	December 31, 2021			
	Total	Level 1	Level 2	Level 3
Cash equivalents:				
Money market funds	$ 79,281	$ 79,281	$ —	$ —
Commercial paper	1,000	—	1,000	—
Corporate debt securities	1,031	—	1,031	—
Total cash equivalents	81,312	79,281	2,031	—
Short-term marketable securities:				
Certificates of deposit	5,594	—	5,594	—
Commercial paper	44,974	—	44,974	—
Corporate debt securities	26,953	—	26,953	—
U.S. treasuries	12,269	12,269	—	—
U.S. government debt securities	1,999	—	1,999	—
Asset backed securities	16,557	—	16,557	—
Total short-term marketable securities	108,346	12,269	96,077	—
Long-term marketable securities:				
Corporate debt securities	1,631	—	1,631	—
U.S. treasuries	2,986	2,986	—	—
Total long-term marketable securities	4,617	2,986	1,631	—
Total	$ 194,275	$ 94,536	$ 99,739	$ —

The Company measures the fair value of money market funds and U.S. treasuries based on quoted prices in active markets for identical securities. Commercial paper, corporate debt securities, certificates of deposits, asset backed securities, and U.S. government debt securities are valued taking into consideration valuations obtained from third-party pricing services. These 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. See Note 3 for further information regarding the amortized cost of our financial instruments.

5. Property and Equipment, Net

Property and equipment and related accumulated depreciation and amortization are as follows (in thousands):

	September 30, 2022	December 31, 2021
Computer equipment and software	$ 1,051	$ 987
Furniture and fixtures	2,285	2,113
Laboratory equipment	25,343	24,679
Leasehold improvements	17,676	14,128
	46,355	41,907
Less accumulated depreciation and amortization	(27,018)	(22,276)
Construction-in-progress	2,335	1,991
Total property and equipment, net	$ 21,672	$ 21,622

Depreciation and amortization expense was $1.7 million and $4.8 million for the three and nine months ended September 30, 2022, respectively, and $1.6 million and $4.8 million for the three and nine months ended September 30, 2021, respectively.

6. Commitments and Contingencies

Leases

The Company leases office, laboratory and storage space in facilities at several locations.

Emeryville Lease

The Company's principal executive offices in Emeryville, California, consisting of office and laboratory space, are leased pursuant to a 120-month operating lease (the "Emeryville Lease"), which the Company entered into in January 2019, with the obligation to pay rent commencing in November 2019. In conjunction with signing the Emeryville Lease, the Company paid a cash security deposit of $0.6 million, which is recorded as a deposit on the Company's condensed consolidated balance sheet as of September 30, 2022. The Emeryville Lease includes a free rent period, an escalation clause for increased rent and a renewal provision allowing the Company to extend this lease for an additional two five-year periods at the then market rental rate. The lessor provided the Company a tenant improvement allowance for a total of $4.0 million to complete the laboratory and office renovation. The Company has determined the tenant improvements to be lessee owned and therefore has recorded a $8.3 million ROU Asset and a $13.1 million lease liability on the condensed consolidated balance sheet as of September 30, 2022. The Company recorded a $8.7 million ROU Asset and a $13.9 million lease liability on the condensed consolidated balance sheet as of December 31, 2021.

Pleasanton Leases

The Company leases 42,620 square feet of office, cleanroom, and laboratory support manufacturing space in Pleasanton, California pursuant to a non-cancelable operating lease (the "Pleasanton Lease"), which the Company entered into in March 2017, with the obligation to pay rent commencing in December 2017. The Pleasanton Lease includes a free rent period, escalating rent payments and a term that expires on November 30, 2024. The Company may extend the lease term for a period of five years at the then market rental rate. The Company obtained an irrevocable letter of credit in March 2017 in the initial amount of approximately $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 its obligations under the Pleasanton lease. The letter of credit may be reduced based on certain levels of cash and cash equivalents the Company holds. As of September 30, 2022, none of the irrevocable letter of credit amount had 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. The unamortized tenant improvement balance is recognized as a component of operating lease ROU Assets on the condensed consolidated balance sheets as of September 30, 2022 and December 31, 2021.

In addition, in May 2019, the Company entered into a 64-month non-cancelable operating lease for additional office space in Pleasanton, California, with an obligation to pay rent commencing in August 2019. In January 2022, the Company amended the lease to add additional leased space and extend the lease expiration date to February 2027.

Cambridge Leases

The Company leases laboratory, office and storage space in several facilities in Cambridge, Massachusetts, pursuant to three separate agreements:

The Company's facility located at 40 Erie Street in Cambridge, Massachusetts is leased pursuant to a 67-month non-cancelable operating lease (the "40 Erie Lease"), which the Company entered into in February 2016, with an obligation to pay rent commencing in October 2016. The lessor provided the Company a tenant improvement allowance for a total of $2.1 million to complete the laboratory and office renovation. In September 2021, the Company executed an amendment to the 40 Erie Lease, which extends its term through April 2025 and provides for monthly base rent amounts, subject to annual increases over the term of the lease.

The Company's facility located at 21 Erie Street in Cambridge, Massachusetts is leased pursuant to a 24-month non-cancelable operating lease (the "21 Erie Lease"), which the Company entered into in September 2018. The 21 Erie Lease has since been amended five times, as a result of which the lease term extends through June 2023.

In March 2021, the Company entered into a 17-month operating lease (the "Cambridge Storage Lease") for additional office and laboratory storage space in Cambridge, Massachusetts, which commenced on April 1, 2021. The

Company also paid an insignificant cash security deposit. The Cambridge Storage Lease was amended in June 2022 to extend the lease term through June 30, 2023.

In conjunction with the 40 Erie Lease, the 21 Erie Lease and the Cambridge Storage Lease, each as amended (if applicable), the Company has paid certain cash security deposits, which in each case included amounts for the applicable last month's rent and has been classified as part of the operating lease ROU Assets. Of the $0.7 million security deposits, $0.4 million was recorded in prepaids and other assets on the Company's condensed consolidated balance sheet and the remaining $0.3 million was recorded in deposits and other long-term assets on the Company's condensed consolidated balance sheet as of September 30, 2022. Security deposits of $0.7 million are recorded in deposits and other long-term assets on the Company's condensed consolidated balance sheet as of December 31, 2021.

Boston Lease

The Company plans to occupy a newly-built facility in Boston, Massachusetts, with office and laboratory space, in 2023 pursuant to a 120-month operating lease (the "Boston Lease"), which the Company entered into in September 2021. The Boston Lease includes a free rent period, an escalation clause for increased rent and a renewal provision allowing the Company to extend the Boston Lease for two additional five-year periods at the then market rental rate. The landlord provided the Company with a tenant improvement allowance of up to approximately $19.1 million for costs relating to the design, permitting and construction of improvements. The Company's obligation to pay rent is expected to commence in the second half of 2023, subject to free rent periods of three and six months with respect to certain premises. The Company expects to be provided early access to the premises to install fixtures and equipment 60 days prior to the anticipated rent commencement date. The Boston Lease is expected to expire in 2033. The Boston 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 Boston Lease and as a security deposit thereunder, the Company has provided the landlord an irrevocable letter of credit in the amount of approximately $4.6 million, which is collateralized by a restricted cash deposit of $4.7 million, and which may be reduced in the fifth and seventh years of the Boston Lease. As of September 30, 2022, none of the irrevocable letter of credit amount had been drawn.

As of September 30, 2022, the Company has not recognized a ROU Asset or lease liability for the Boston Lease as it did not control the underlying assets at any time in the nine months ended September 30, 2022. Under the Boston Lease, the Company is obligated to make minimum lease payments of approximately $79.1 million for the years from 2023 to 2033, which includes rent abatement during the free rent periods.

The Company's operating leases include various covenants, indemnities, defaults, termination rights, security deposits and other provisions customary for lease transactions of this nature.

The components of lease costs, which were included in the Company's condensed consolidated statements of operations and comprehensive income (loss), were as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Lease cost				
Operating lease cost	$ 2,112	$ 1,922	$ 6,633	$ 5,743
Total lease cost	$ 2,112	$ 1,922	$ 6,633	$ 5,743

Supplemental information related to leases was as follows:

	Nine Months Ended September 30,	
	2022	2021
Cash paid for amounts included in the measurement of lease liabilities (in thousands):		
Operating cash flows from operating leases	$ 6,467	$ 5,902
New right-of-use assets obtained in exchange for lease obligations (in thousands):		
Operating leases	$ 1,959	$ 6,562
Weighted-average remaining lease term (years):		
Operating leases	5.0	5.4
Weighted-average discount rate:		
Operating leases	7.5%	7.3%

As of September 30, 2022, minimum annual rental payments under the Company's lease agreements are as follows (in thousands):

	Lease Financing Obligation
Year ending December 31,	
2022 (remaining three months)	$ 2,523
2023	9,192
2024	12,527
2025	10,658
2026	10,376
Thereafter	62,812
Total minimum payments	108,088
Less: Amounts representing interest expense	(5,310)
Less: Amounts representing lease payments under the Boston Lease	(79,701)
Present value of future minimum lease payments	23,077
Less: Current portion of lease liability	(6,325)
Noncurrent portion of lease liability	$ 16,752

Agreements with CROs

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 its antibody drug candidates. In June 2022, the Company notified the CRO of its intent to terminate the agreement effective in August 2022. The Company is also obligated to pay the CRO certain milestone payments of up to an aggregate of $36.4 million on achievement of specified events. None of these events had occurred as of September 30, 2022. During the three and nine months ended September 30, 2022, the Company had no research and development expense under the agreement. During the three and nine months ended September 30, 2021, the Company had immaterial research and development expense under the agreement.

In May 2019, the Company entered into a contract research and testing agreement with another third-party CRO to provide antibody discovery related services. In March 2022, the Company notified that CRO of its intent to terminate the agreement effective in May 2022. Under the agreement, the Company is obligated to pay the CRO certain milestone payments of up to $34.8 million on achievement of specified events. None of these events had occurred as of September 30, 2022. No research and development expense was recorded under the agreement during the three and nine months ended September 30, 2022 and 2021.

Guarantees and Indemnifications

The Company, as permitted under Delaware law and in accordance with its certificate 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, with respect to 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. Balance Sheet Components

Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consist of the following (in thousands):

	September 30, 2022	December 31, 2021
Prepaid research and development-related expenses	$ 4,839	$ 2,672
Net contract asset	—	1,385
Collaboration receivable	291	688
Prepaid insurance	52	1,769
Interest and other receivables	529	292
Facilities-related deposits	384	—
Other	796	866
Total prepaid expenses and other current assets	$ 6,891	$ 7,672

Deposits and Other Long-Term Assets

Deposits and other long-term assets consist of the following (in thousands):

	September 30, 2022	December 31, 2021
Lease security deposits	$ 934	$ 1,305
Prepaid research and development-related expenses	1,123	1,047
Prepaid rent	3,475	—
Total deposits and other long-term assets	$ 5,532	$ 2,352

8. Debt

In July 2022, the Company entered into a loan and security agreement (the "Loan Agreement") with Hercules Capital, Inc. ("Hercules") and Silicon Valley Bank ("SVB"), which provides the Company a 60-month term loan facility for up to $80.0 million in borrowing capacity across five potential tranches. At the closing of the Loan Agreement, the Company drew $20.0 million from the first tranche and can draw up to an additional $10.0 million through March 2023. The remaining tranches provide up to $50.0 million borrowing capacity and become available upon the Company meeting certain milestones set forth in the Loan Agreement. The term loan is secured by substantially all of the Company's assets, other than intellectual property. There are no warrants associated with the Loan Agreement.

Borrowings under the Loan Agreement bear interest (i) at an annual cash rate equal to the greater of (x) the lesser of (1) the prime rate (as customarily defined) and (2) 5.50%, in either case, plus 3.15%, and (y) 7.15% and (ii) at an annual payment-in-kind rate which may equal 2.00%. The Company is required to make monthly interest-only payments prior to the amortization date of January 1, 2025, subject to a potential six-month and one-year extension upon satisfaction of certain conditions. In addition, the Company paid a $150,000 facility charge upon closing, and must pay a facility charge equal to 0.50% of the principal amount of any borrowings made pursuant to the amounts under the last four tranches.

All unpaid principal and accrued and unpaid interest with respect to each term loan is due and payable in full on July 19, 2027. At the Company's option, the Company may prepay all or any portion of the outstanding borrowings, plus accrued and unpaid interest thereon and fees and expenses, subject to a prepayment premium ranging from zero

to 2.5%, during the first three years after closing, depending on the year of such prepayment. Upon repayment of the term loan, the Company is required to make a final payment fee to the lenders equal to 5.75% of the aggregate original principal amount of the loan. Debt issuance costs have been treated as debt discounts on the Company's condensed consolidated balance sheet and together with the final payment are being amortized to interest expense throughout the life of the term loan using the effective interest rate method.

Beginning on April 1, 2023, so long as the Company's market capitalization is equal to or less than $400.0 million, the Company is subject to a minimum liquidity requirement equal to the then outstanding balance under the Loan Agreement multiplied by 0.55 or 0.45, which multiplier depends on whether the Company achieves certain performance milestones.

The Company's obligations under the Loan Agreement are subject to acceleration upon the occurrence of customary events of default, including payment default, insolvency and the occurrence of certain events having a material adverse effect on the Company, including (but not limited to) material adverse effects upon the business, operations, properties, assets or financial condition of the Company and its subsidiaries, taken as a whole. As of September 30, 2022, the Company is in compliance with all covenants in the Loan Agreement.

As of September 30, 2022, there were unamortized issuance costs and debt discounts of $1.9 million which were recorded as a direct deduction from the term loan on the condensed consolidated balance sheet. Interest expense related to the Loan Agreement was $0.5 million for the three and nine months ended September 30, 2022. The effective interest rate on the term loan, including the amortization of the debt discount and issuance costs, and accretion of the final payment, was 13%. The components of the long-term debt balance are as follows:

	September 30, 2022
Principal loan balance	$ 20,000
Final fee	1,150
Unamortized debt discount and issuance costs	(1,869)
Long term debt, net	$ 19,281

As of September 30, 2022, the estimated future principal payments due (excluding the final payment fee) were as follows:

2022 (remaining three months)	$ —
2023	—
2024	—
2025	7,092
2026	7,712
2027	5,196
Total principal payments	$ 20,000

9. Collaboration and License Agreements and Grant Revenue

2seventy bio, Inc.

In August 2018, the Company entered into a Research Collaboration and License Agreement with bluebird bio, Inc. ("bluebird"). In November 2021, bluebird assigned the Research Collaboration and License Agreement (the "2seventy Agreement") to its affiliate, 2seventy bio, Inc. ("2seventy"), in connection with bluebird's restructuring and subsequent spin-out of 2seventy. Under the terms of the 2seventy Agreement, the Company provides to 2seventy tumor-specific targets across several tumor types and, in certain cases, T cell receptors (TCR) directed to those targets. The Company received a non-refundable upfront payment of $20.0 million, and 2seventy also concurrently acquired 768,115 shares of the Company's Series C convertible preferred stock for $10.0 million at $13.04 per share. Per the 2seventy Agreement, 2seventy was also provided an option to acquire shares of the Company's common stock at the same price as all other investors in connection with the Company's initial public offering ("IPO"). In October 2018, 2seventy purchased 666,667 shares of the Company's common stock at the price to the public of $15.00 per share for a total of $10.0 million. Under the terms of the 2seventy Agreement, the Company is eligible to earn development, regulatory, and sales-based milestones in an amount of up to $1.2 billion, and single-digit royalties on sales of products

that utilize the technology subject to the 2seventy Agreement. None of these events had occurred as of September 30, 2022, and no royalties were due from the sale of licensed products.

In August 2019, the Company entered into a First Amendment to the 2seventy Agreement, which extended the timeline for the Company and 2seventy to execute a Patient Selection Services Agreement from within one year to within two years after the Effective Date of the 2seventy Agreement. In August 2020, the Company entered into a Second Amendment, which extended the timeline of the Patient Selection Services Agreement to within three years and also extended the Tissue Analysis Period from February 28, 2021 to June 30, 2021. In April 2021, the Company entered into a Third Amendment, which removed the Patient Selection Services Agreement in its entirety and extended the Tissue Analysis Period from June 30, 2021 to December 31, 2021. The amendments were entered into for administrative purposes, and the Company determined the amendments were not a modification of contract under the contract with customers guidance.

2seventy may terminate the 2seventy Agreement by giving a 120-day prior written notice to the Company at any time after the effective date of the agreement. Unless terminated early, the agreement has a term that ends upon the last payment owed by the Company on a licensed product. The 2seventy Agreement may be terminated for cause by either party based on an uncured material breach by the other party or bankruptcy of the other party. Upon early termination, all ongoing activities under the agreement and all mutual collaboration, development and commercialization licenses and sublicenses will terminate. The licenses granted by the Company to 2seventy under the licensed intellectual property will remain in effect in accordance with their respective terms. Additionally, all of 2seventy's payment obligations that have not yet accrued related to future milestone and royalty payments will be reduced by 50% for the remainder of the agreement term.

The Company concluded that 2seventy is a customer, and the contract is not subject to guidance on collaborative arrangements. This is because the Company granted 2seventy a license to the Company's intellectual property and provided research and development services, all of which are outputs of the Company's ongoing activities, in exchange for consideration.

The Company identified the following three material promises under the 2seventy Agreement: (i) transfer of a license to intellectual property and related technology know-how ("License and Know-How"); (ii) the obligation to perform target selection and TCR generation services ("Research and Development Services"); and (iii) participation on the Joint Steering Committee (the "JSC"). The Company provided to 2seventy standard indemnification and protection of licensed intellectual property, which is part of assurance that the license meets the contract's specifications and is not an obligation to provide goods or services.

The Company considered that the License and Know-How has standalone functionality, was considered to be functional intellectual property, and is capable of being distinct. However, the Company determined that the License and Know-How is not distinct from the Research and Development Services or participation on the JSC within the context of the 2seventy Agreement, because 2seventy is dependent on the Company to execute the Research and Development Services and participate on the JSC in order for 2seventy to benefit from the License and Know-How. As such, the License and Know-How is combined with the Research and Development Services and participation on the JSC into a single performance obligation, and the transaction price under this arrangement will be allocated to this single performance obligation.

The Company has also determined that all other goods or services that are contingent upon 2seventy reaching various milestones are not considered performance obligations at the inception of the arrangement.

The transaction price at the inception of the 2seventy Agreement consisted of the upfront payment of $20.0 million and the $10.0 million received from 2seventy for the purchase of the Company's Series C convertible preferred stock. The sale of the Series C convertible preferred stock was not considered to be a performance obligation, as it was a separate financing component of the transaction. Accordingly, $10.0 million of the transaction price was allocated to the issuance of 768,115 shares of Series C convertible preferred stock at fair value of $13.04 per share and recorded in stockholders' equity.

The variable consideration related to the remaining development, regulatory, and sales-based milestones payments has not been included in the initial transaction price and continues to be fully constrained as of December 31, 2021. As part of its evaluation of the constraint, the Company considered numerous factors, including that receipt of the milestones is outside the control of the Company and contingent upon initiation of clinical trials for early-stage targets and 2seventy's development efforts. Any variable consideration related to sales-based milestones (including royalties) will be recognized when the related sales occur, as they were determined to relate predominantly to the

License and Know-How granted to 2seventy. The Company will re-evaluate the transaction price in each reporting period and as uncertain events are resolved or other changes in circumstances occur.

For revenue recognition purposes, the Company determined that the duration of the 2seventy Agreement began on the effective date in August 2018 and ends upon completion of the Research and Development Services, which is also when the participation on the JSC is no longer an obligation. The contract duration is defined as the period in which parties to the contract have present enforceable rights and obligations. The Company also analyzed the impact of 2seventy terminating the agreement prior to August 2023 and determined, considering both quantitative and qualitative factors, that there were substantive non-monetary penalties to 2seventy for doing so.

Revenue is recognized when, or as, the Company satisfies its performance obligation by transferring the promised services to 2seventy. Revenue is being recognized over time using a cost-based input method, based on internal labor cost effort to perform the research services, since the internal labor cost incurred over time is thought to best reflect the transfer of services to 2seventy. In applying a cost-based input method of revenue recognition, we use actual costs incurred relative to budgeted costs to fulfill the combined performance obligation. A cost-based input method of revenue recognition requires us to make estimates of costs to complete the performance obligation. The cumulative effect of any revisions to estimated costs to complete the performance obligation will be recorded in the period in which changes are identified and amounts can be reasonably estimated. A significant change in these assumptions and estimates could have a material impact on the timing and amount of revenue recognized in future periods.

The Company recognized $0.2 million and $6.5 million, respectively, during the three and nine months ended September 30, 2022, and $0.8 million and $2.1 million, respectively, during the three and nine months ended September 30, 2021 in collaboration revenue under the 2seventy Agreement. The amount of collaboration revenue recognized during the nine months ended September 30, 2022 included a cumulative catch-up adjustment increasing contribution revenue by $5.5 million, respectively, due to revisions to estimated costs to complete the remaining performance obligation. The adjustment resulted in a decrease in the Company's loss from operations of $5.5 million and a decrease in loss per share of $0.06 for the nine months ended September 30, 2022. Deferred revenue of $2.2 million and $8.7 million was recorded on the condensed consolidated balance sheets in both current and long-term liabilities as of September 30, 2022 and December 31, 2021, respectively. Deferred revenue relates to the performance obligations identified under the 2seventy Agreement and will be recognized over the period the performance obligations are expected to be satisfied, which is currently estimated to be through August 2023.

Changes in the deferred revenue balance during the nine months ended September 30, 2022 for the 2seventy Agreement are as follows (in thousands):

	Deferred Revenue
Balance at December 31, 2021	$ 8,725
Additions	—
Deductions	(6,488)
Balance at September 30, 2022	$ 2,237

There were no receivables or net contract assets recorded as of September 30, 2022 and December 31, 2021 associated with the 2seventy Agreement.

Gilead Sciences, Inc.

In January 2021, the Company entered into a Collaboration, Option and License Agreement (the "Gilead Collaboration Agreement") with Gilead Sciences, Inc. ("Gilead") to research and develop a vaccine-based immunotherapy as part of Gilead's efforts to find a curative treatment for HIV infection. Under the terms of the Gilead Collaboration Agreement, the Company granted to Gilead an exclusive, worldwide license to develop and commercialize a HIV-specific therapeutic vaccine utilizing the Company's technology. Gilead is responsible for conducting all development and commercialization activities beginning with a Phase 1 study, and the Company is responsible for contributing to preclinical research studies and participation in a joint steering committee (collectively, "research and development activities"). Concurrently with the execution of the Gilead Collaboration Agreement, the Company and Gilead entered into a Supply Agreement (the "Gilead Supply Agreement") under which the Company will supply research product and GMP product ("Product Supply") that may be required under the Gilead Collaboration Agreement until Gilead completes its first GMP product batch, and the Company will participate in a

joint manufacturing team (collectively, “product supply activities”). In addition, the Company also concurrently entered into a Stock Purchase Agreement (the “Gilead Stock Purchase Agreement”) under which Gilead acquired, in a private placement transaction, 1,169,591 shares of the Company’s common stock. The common shares were issued to Gilead with certain registration rights and certain standstill and market stand-off provisions. The Company determined that these concurrent contracts represent a combined arrangement (the “Gilead Arrangement”).

Under the Gilead Collaboration Agreement, the Company received a non-refundable upfront payment of $30.0 million. Under the Gilead Collaboration Agreement and the Gilead Supply Agreement, the Company will receive additional reimbursement payments for expenses incurred in the research and development activities and product supply activities. Under the Gilead Stock Purchase Agreement, the common shares were sold at a price of $25.65 per share for a total of $30.0 million. The Company’s common stock at fair value on closing was $18.10 per share. If Gilead decides to move forward with development beyond the initial Phase 1 study (the “Option”), the Company will receive a $40.0 million non-refundable option fee and will be eligible to receive up to an aggregate of $685.0 million if certain clinical, regulatory and commercial milestones are achieved, as well as tiered royalties ranging from the mid-single digits to low double-digits on net sales of a therapeutic product utilizing its technology. None of these events had occurred as of September 30, 2022, and no royalties were due from the sale of licensed products.

Gilead may terminate the Gilead Collaboration Agreement for convenience by giving a 90-day prior written notice to the Company at any time after the effective date of the agreement. Unless terminated early, the agreement has a term that ends upon the expiration of the royalty term, or, if the Option is not exercised, by the end of the Option term. The Gilead Collaboration Agreement may be terminated for cause by either party based on an uncured material breach by the other party, insolvency of the other party, or patent challenge. Upon early termination, all ongoing activities under the agreement and all mutual collaboration, development and commercialization licenses and sublicenses will terminate. The licenses granted by the Company to Gilead under the licensed intellectual property will remain in effect in accordance with their respective terms. Additionally, if terminated early by Gilead for convenience or by the Company for material breach or insolvency, all of Gilead’s payment obligations for reimbursable costs or for future milestone and royalty payments remain. If terminated early by Gilead for material breach or insolvency, all of Gilead’s unaccrued payment obligations related to future milestone and royalty payments will be reduced by 50% for the remainder of the agreement term. Furthermore, Gilead may terminate the Gilead Supply Agreement without cause by giving six months prior written notice and may terminate any active orders with 60-day notice without terminating the agreement, and either party may terminate based on an uncured material breach, insolvency of the other party, or in the event that the Gilead Collaboration Agreement is terminated. Upon termination, the Company will deliver all supply products that have been produced and destroy, reimburse or deliver materials that Gilead has reimbursed, and Gilead must pay for any manufacturing costs that the Company has actually incurred or committed to pay, including any cancellation costs owed to subcontractors.

The Company concluded that Gilead is a customer and therefore revenue recognition should be accounted for in accordance with ASC 606, because the Company granted to Gilead licenses to its intellectual property and will provide research and development services and Product Supply, all of which are outputs of the Company’s ongoing activities, in exchange for consideration. The Option, if exercised by Gilead, will be considered a modification that increases the scope of the arrangement beyond the Option term.

The Company identified the following performance obligations under the Gilead Collaboration Agreement: (i) licenses including an exclusive (in the HIV field), royalty-free, worldwide collaboration license and transfer of know-how and an exclusive (in the HIV field) worldwide, royalty-bearing development and commercialization license subject to restrictions on its use during the Option term and an exclusive option to release such restrictions; (ii) preclinical research and development activities, manufacturing-related activities, and participation on a Joint Steering Committee; and (iii) product supply, including research and GMP product, until Gilead completes its first GMP batch, and participation on a Joint Manufacturing Team.

The Company considered that the licenses and know-how have standalone functionality, are considered to be functional intellectual property and are capable of being distinct. The Company also determined that the research and development activities and product supply by Gritstone could be provided by resources otherwise available to Gilead and thus are capable of being distinct.

The Company has also determined that the pricing for optional goods and services and release of license restrictions upon exercise of the Option do not constitute material rights and are not a potential performance obligation. The Company evaluated whether there is an interdependence between the promises and determined that the licenses are a combined solution and the predominant performance obligation, while the other promises are separately

identifiable in the context of the contract; however, the research and development activities are dependent on the research product supply, which is accounted for as a combined performance obligation. As a result, the Company identified three performance obligations in the Gilead Arrangement: (i) exclusive licenses and know-how, (ii) research and development activities and product supply, and (iii) GMP product supply.

The transaction price at the inception of the Gilead Collaboration Agreement consisted of the upfront payment of $30.0 million and the $30.0 million received for the sale of the Company's common stock. The sale of the common stock was not considered to be a performance obligation, as it was a separate financing component of the transaction. Accordingly, $21.2 million of the transaction price was allocated to the issuance of 1,169,591 shares of the Company's common stock at fair value on closing of $18.10 per share and recorded in stockholders' equity. The remaining $8.8 million of the common stock purchase price in excess of the fair value of the shares received is added to the transaction price for the Gilead Collaboration Agreement. In addition, the initial transaction price includes estimated variable consideration for budgeted reimbursement of research and development costs and product supply. The variable consideration related to reimbursable costs and product supply has been constrained as of September 30, 2022 based on the current research and development plan forecast. The Company will re-evaluate the transaction price in each reporting period and as uncertain events are resolved or other changes in circumstances occur.

The Company determined that the variable consideration for the $40.0 million option exercise fee and for the development, regulatory, and sales-based milestones payments were probable of significant revenue reversal as their achievement was highly dependent on factors outside the Company's control. As a result, these payments were fully constrained and were not included in the transaction price. Any variable consideration related to sales-based milestones (including royalties) will be recognized when the related sales occur, as they were determined to relate predominantly to the exclusive licenses and know-how granted to Gilead.

The transaction price is allocated to the performance obligation based upon relative standalone selling prices, which were determined for the exclusive licenses and know-how using an adjusted market approach and for the research and development activities and product supply using a cost plus reasonable margin approach. Variable consideration is allocated to the specific performance obligations to which it relates.

For revenue recognition purposes, the Company determined that the duration of the contract began on the effective date in January 2021 and ends upon (i) the completion of the Option term, which is expected to end two to four years after the effective date, if the Option is not exercised or (ii) the expiration of the royalty-term on a product-by-product and country-by-country basis. The Company also analyzed the impact of Gilead terminating the agreement prior to the end of the Option term and determined, considering both quantitative and qualitative factors, that there were substantive non-monetary penalties to Gilead for doing so.

Revenue for the exclusive licenses and know-how was recognized on the effective date of the Gilead Collaboration Agreement at the point in time that the licenses are effective. The research and development activities and product combined performance obligation and the GMP product supply performance obligation are recognized over time when, or as, the Company transfers the promised goods and services to Gilead. Research and development service and product supply revenues will be recognized over time using a cost-based input method, based on internal and external labor cost effort to perform the services, costs to acquire research materials, and costs of product supply, since the costs incurred over time are thought to best reflect the transfer of goods and services to Gilead. In applying a cost-based input method of revenue recognition, we use actual costs incurred relative to estimated total costs to fulfill each performance obligation. A cost-based input method of revenue recognition requires us to make estimates of costs to complete the performance obligation. The cumulative effect of any revisions to estimated costs to complete the performance obligation and associated variable consideration will be recorded in the period in which changes are identified and amounts can be reasonably estimated. A significant change in these assumptions and estimates could have a material impact on the timing and amount of revenue recognized in future periods.

For the three and nine months ended September 30, 2022, the Company did not record any license revenue. For the three and nine months ended September 30, 2022, the Company recorded $0.2 million and $1.5 million, respectively, as collaboration revenue as a result of satisfying its performance obligations by transferring the promised goods and services estimated by the costs incurred for the Gilead Collaboration Agreement. For the three months ended September 30, 2021, the Company did not record any license revenue, while $38.6 million was recognized as license revenue for the nine months ended September 30, 2021. For the three and nine months ended September 30, 2021, the Company recognized $1.6 million and $4.1 million, respectively, as collaboration revenue as a result of satisfying its performance obligations by transferring the promised goods and services estimated by the costs incurred

for the Gilead Collaboration Agreement. There was no contract asset recorded on the condensed consolidated balance sheet as of September 30, 2022. A contract asset of $1.4 million was recorded on the condensed consolidated balance sheet as of December 31, 2021 for supply costs that were incurred during the year ended December 31, 2021, but not billable until future periods when the asset is released. The contract asset relates to the performance obligations yet to be satisfied identified under the Gilead Collaboration Agreement. There was $0.1 million recorded as deferred revenue as of September 30, 2022 and no deferred revenue as of December 31, 2021 associated with the Gilead Collaboration Agreement.

Changes in the contract asset and deferred revenue balance during the nine months ended September 30, 2022 for the Gilead Collaboration Agreement are as follows (in thousands):

	Contract Asset	Deferred Revenue
Balance at December 31, 2021	$ 1,385	$ —
Additions	123	122
Deductions	(1,508)	(1)
Balance at September 30, 2022	$ —	$ 121

There was $0.2 million and $0.7 million of receivables recorded on the condensed consolidated balance sheet as a current asset in the prepaid expenses and other current assets balance as of September 30, 2022 and December 31, 2021, respectively, associated with the Gilead Collaboration Agreement.

The Company deferred $0.1 million in incremental costs to acquire the Gilead Collaboration Agreement in the first quarter of 2021 allocated to performance obligations recognized over time, which will be recognized over time in each period proportionate to revenue recognition. As of September 30, 2022, deferred contract acquisition costs were zero. Deferred contract acquisition costs amortized during the three and nine months ended September 30, 2022 and 2021 were negligible.

Arbutus Biopharma Corporation

In October 2017, the Company entered into an Exclusive License Agreement with Arbutus Biopharma Corporation (“Arbutus”) and its wholly-owned subsidiary, Protiva Biotherapeutics Inc. Certain terms of this agreement were modified by an amendment in July 2018 (such amended license agreement, the “Arbutus License Agreement”). Under the Arbutus License Agreement, Arbutus granted the Company exclusive license rights under certain intellectual property related to Arbutus’ lipid nanoparticle (“LNP”) technology. During the three and nine months ended September 30, 2022 and 2021, the Company had no research and development expense under the Arbutus License Agreement. The Company is obligated to pay Arbutus certain milestone payments up to $123.5 million on achievement of specified events, and royalties on sales of its licensed products. Following the acceptance of our investigational new drug application for GRANITE by the U.S. Food and Drug Administration (the “FDA”), the Company made a $2.5 million development milestone payment to Arbutus in September 2018 that was recorded as research and development expense. In August 2019, a milestone was met following the initial patient treatment of SLATE in the Company’s GO-005 clinical trial. In 2019, the Company recorded $3.0 million as research and development expense in connection with the milestone. None of the other events had occurred as of September 30, 2022, 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. Upon achievement of a milestone related to the Company’s Phase 1 clinical trial for GRANITE, GO-004, in December 2018 the Company recorded an insignificant amount to research and development expense for amounts owed to the Hospital Cancer Center, which was paid to the hospital in February 2019. None of the other milestone events had occurred as of September 30, 2022, and no royalties were due from the sales of licensed products.

Genevant Sciences GmbH

In October 2020, the Company entered into an Option and License and Development Agreement (the "2020 Genevant License Agreement") with Genevant Sciences GmbH ("Genevant"), pursuant to which Genevant granted the Company exclusive license rights under certain intellectual property related to Genevant's LNP technology for a single therapeutic indication, and the Company agreed to pay Genevant an initial payment of $2.0 million, up to an aggregate of $71.0 million in specified development, regulatory, and commercial milestones, and low to mid-single digit royalties on net sales of licensed products. The upfront payment of $2.0 million was included in research and development expense for the year ended December 31, 2020. Genevant is a spin-off of Arbutus, and the 2020 Genevant License Agreement expands Gritstone's intellectual property rights to such LNP technology originally obtained pursuant to the Company's license agreement with Arbutus. Prior to the 2020 Genevant License Agreement, the Company licensed Arbutus' LNP technology for indications in the oncology space. The remainder of Arbutus' IP portfolio was transferred to Genevant in the spin-off. In March 2022, a milestone in the amount of $1.0 million was met, which was included in research and development expense for the nine months ended September 30, 2022.

Pursuant to the 2020 Genevant License Agreement, Genevant also granted the Company certain options to license the LNP technology for additional therapeutic indications of up to $1.5 million for each indication and $1.0 million to extend the option term. The 2020 Genevant License Agreement continues in effect until the last to expire royalty term or early termination. It is terminable by the Company for convenience with 90 days prior written notice or immediately if based on certain product safety or efficacy or regulatory criteria. Either party may terminate the agreement for material breach, subject to a cure period, and Genevant may terminate the agreement if the Company challenges a licensed patent.

In January 2021, the Company entered into a Non-Exclusive License and Development Agreement (the "2021 Genevant License Agreement") with Genevant. Pursuant to the 2021 Genevant License Agreement, the Company obtained a nonexclusive license to Genevant's LNP technology to develop and commercialize self-amplifying RNA ("samRNA") vaccines against SARS-CoV-2, the virus that causes COVID-19. Under the 2021 Genevant License Agreement, the Company made a $1.5 million upfront payment to Genevant, and Genevant is eligible to receive from the Company up to an aggregate of $141.0 million in contingent milestone payments per product, plus certain tiered royalties, upon achievement of development and commercial milestones. In certain scenarios, in lieu of milestones and royalties, Genevant will be entitled to a percentage of amounts that the Company receives from sublicenses under the 2021 Genevant License Agreement, subject to certain conditions. In March 2021, a milestone in the amount of $1.0 million was met following the initial patient treatment in the Phase 1 clinical trial conducted through the NIAID-supported Infectious Diseases Clinical Research Consortium ("IDCRC"). Both the $1.5 million upfront and $1.0 million milestone payments were recorded as research and development expense for the nine months ended September 30, 2021. None of the other milestone events had occurred as of September 30, 2022.

Coalition for Epidemic Preparedness Innovations (CEPI)

On August 14, 2021, the Company entered into the CEPI Funding Agreement with CEPI, under which CEPI agreed to provide funding of up to $20.6 million to the Company to advance the Company's CORAL program, a second-generation COVID-19 vaccine program, with an initial clinical trial in South Africa. Under the terms of the agreement, CEPI is funding a multi-arm Phase 1 study evaluating the CORAL program's samRNA vaccine in naïve, convalescent, and HIV+ patients. The study is evaluating three different samRNA vaccine constructs that each target both the spike protein and other SARS-CoV-2 targets and are designed to drive both robust B and T cell immune responses. The funding is also supporting pre-clinical studies, scale-up and formulation development to enable manufacturing of large quantities of stable vaccine product.

Under the terms of the CEPI Funding Agreement, among other things, the Company and CEPI agreed on the importance of global equitable access to the vaccine produced pursuant to the CEPI Funding Agreement. The vaccine, if approved, is expected to be made available to the COVAX Facility for procurement and allocation. The COVAX Facility aims to deliver equitable access to COVID-19 vaccines for all countries, at all levels of development, that wish to participate.

The scope and continuation of the CEPI Funding Agreement may be amended depending on ongoing developments of the COVID-19 outbreak and the success of the Company's COVID-19 vaccine candidate developed under the CEPI Funding Agreement relative to other third-party COVID-19 vaccine candidates or treatments. If the World Health Organization ("WHO"), CEPI or a regulatory authority having jurisdiction over a clinical trial performed under the CEPI Funding Agreement determines that a third-party product candidate has substantially

greater potential than the Company's COVID-19 vaccine candidate developed under the CEPI Funding Agreement and should be prioritized instead for a particular trial, the Company must consider in good faith any written request of CEPI not to proceed with a clinical trial of such COVID-19 vaccine candidate; however the determination of whether or not to proceed with such trial shall be made by the Company in its sole discretion. In addition, CEPI has the right to unilaterally terminate the CEPI Funding Agreement upon prior written notice if CEPI determines that (i) there are material safety, regulatory, scientific misconduct or ethical issues with the project undertaken by the Company under the CEPI Funding Agreement, (ii) the project undertaken by the Company under the CEPI Funding Agreement should be terminated, (iii) the Company becomes unable to discharge its obligations under the CEPI Funding Agreement, (iv) the Company fails to meet certain criteria set forth in the CEPI Funding Agreement, or (v) the Company commits fraud or a financial irregularity, as such terms are defined in the CEPI Funding Agreement.

In December 2021, the Company and CEPI entered into an amendment to the CEPI Funding Agreement, under which CEPI agreed to provide additional funding up to $5.0 million, for a total of up to $25.6 million, to the Company to conduct a Phase I clinical trial of the Company's Omicron vaccine candidate in South Africa.

CEPI advances grant funds upon request by the Company consistent with the agreed upon amounts and schedules as provided in the CEPI Funding Agreement. The first tranche of funding of $11.3 million was received in September 2021, and the second tranche of funding of $2.7 million was received in April 2022.

Payments received in advance that are related to future performance are deferred and recognized as grant revenue when the research and development activities are performed. Cash payments received under the CEPI Funding Agreement are restricted as to their use until expenditures contemplated in the agreement are incurred. During the three and nine months ended September 30, 2022, the Company recognized grant revenue of $2.3 million and $6.9 million, respectively, under the CEPI Funding Agreement. During the three and nine months ended September 30, 2021, the Company recognized grant revenue of $0.2 million under the CEPI Funding Agreement. As of September 30, 2022 and December 31, 2021, short term deferred revenue of $4.9 million and $9.4 million, respectively, was recorded on the condensed consolidated balance sheet. Deferred revenue will be recognized over the period in which the CEPI Funding Agreement activities related to the first and second tranches of funding are expected to take place, which is currently estimated to be through the first half of 2023. As of September 30, 2022 and December 31, 2021, $4.9 million and $9.4 million, respectively, was recorded as short-term restricted cash on the condensed consolidated balance sheet.

Changes in the deferred revenue balance during the nine months ended September 30, 2022 for the CEPI Funding Agreement are as follows (in thousands):

	Deferred Revenue
Balance at December 31, 2021	$ 9,379
Additions	2,697
Deductions	(7,166)
Balance at September 30, 2022	$ 4,910

Gates Foundation

In November 2021, the Company entered into a Grant Agreement with the Gates Foundation (the "Gates Grant Agreement"), which provides funding for the Company's development of an optimal immunogen in the context of a therapeutic human papillomavirus ("HPV") vaccine. In consideration for the work to be performed, the Gates Foundation provided the Company with an upfront payment of $2.2 million in December 2021, and future funding of $1.0 million is expected to be received by the Company in the first quarter of 2023, for a total grant amount of up to $3.2 million.

Payments received in advance that are related to future performance are deferred and recognized as grant revenue when the research and development activities are performed. Cash payments received under the Gates Grant Agreement are restricted as to their use until expenditures contemplated in the funding agreement are incurred. The Company did not recognize any grant revenue under the Gates Grant Agreement in 2021. During the three and nine months ended September 30, 2022, the Company recognized $0.3 million and $0.8 million, respectively, in revenue under the Gates Grant Agreement. As of September 30, 2022, restricted cash and short-term deferred revenue of $1.4 million was recorded on the condensed consolidated balance sheet. Deferred revenue will be recognized over the period in which the funding agreement activities related to the first tranche of funding are expected to take place, which is currently estimated to be through the first half of 2023.

Changes in the deferred revenue balance during the nine months ended September 30, 2022 for the Gates Grant Agreement are as follows (in thousands):

	Deferred Revenue
Balance at December 31, 2021	$ 2,225
Additions	—
Deductions	(805)
Balance at September 30, 2022	$ 1,420

10. Stockholders' Equity

The Company's amended and restated certificate of incorporation provides for 300,000,000 shares of common stock and 10,000,000 shares of preferred stock authorized for issuance, each with a par value of $0.0001 per share.

As of September 30, 2022 and December 31, 2021, no shares of preferred stock were issued and outstanding.

As of September 30, 2022 and December 31, 2021, there were 73,134,051 and 69,047,878 shares of common stock issued and outstanding, respectively. Holders of the Company's common stock are entitled to one vote per share.

Sale of Common Stock and Pre-Funded Warrants

In October 2019, the Company filed a Registration Statement on Form S-3 (the "2019 Shelf Registration Statement") with the SEC, covering the offering of up to $250.0 million of common stock, preferred stock, debt securities, warrants and units. The 2019 Shelf Registration Statement included a prospectus supplement covering the issuance and sale of up to $75.0 million of the Company's common stock, from time to time, through an "at-the-market" offering program (the "2019 ATM Offering Program") under the Securities Act of 1933, as amended (the "Securities Act"). The SEC declared the 2019 Shelf Registration Statement effective on November 8, 2019.

In connection with the 2019 ATM Offering Program, in October 2019, the Company entered into a sales agreement (the "2019 Sales Agreement") with Cowen and Company, LLC ("Cowen"), pursuant to which Cowen acts as the Company's sales agent and, from time to time, offers and sells shares of the Company's common stock having an aggregate offering price of up to $75.0 million. Cowen is entitled to compensation for its services equal to up to 3.0% of the gross proceeds of any shares of common stock sold under the 2019 Sales Agreement. In addition, the Company agreed to reimburse a portion of Cowen's expenses in connection with the 2019 ATM Offering Program up to $50,000. During the year ended December 31, 2021, the Company issued and sold 3,990,869 shares of its common stock through its 2019 ATM Offering Program and received net proceeds of approximately $36.6 million, net of commissions and other offering costs. During the nine months ended September 30, 2022, there have been no sales of shares of the Company's common stock through its 2019 ATM Offering Program.

In December 2020, the Company entered into two private placement financing transactions (collectively, the "First PIPE Financing"), as follows: (i) to sell 5,543,351 shares of its common stock at a price of $3.34 per share and pre-funded warrants (the "Warrants") to purchase 27,480,719 shares of common stock at a price of $3.34 per share (of which $3.33 per share was prepaid by each purchaser), and (ii) to sell an additional 4,043,127 shares of its common stock at a price per share of $3.71. In connection with the First PIPE Financing, the Company received aggregate net proceeds of approximately $119.8 million. The Warrants are exercisable upon issuance at an exercise price of $0.01 per share.

The outstanding Warrants generally may not be exercised if the holder's aggregate beneficial ownership would be more than 9.99% of the total issued and outstanding shares of the Company's common stock following such exercise. The exercise price and number of shares of common stock issuable upon the exercise of the Warrants (the "Warrant Shares") are subject to adjustment in the event of any stock dividends and splits, reverse stock split, recapitalization, reorganization or similar transaction, as described in the Warrant agreements. Under certain circumstances, the Warrants may be exercisable on a "cashless" basis. In connection with the issuance and sale of the common stock and Warrants, the Company granted the purchasers certain registration rights with respect to the Warrants and the Warrant Shares.

The Warrants were classified as a component of permanent stockholders' equity within additional paid-in-capital and were recorded at the issuance date using a relative fair value allocation method. The Warrants are equity

classified because they are freestanding financial instruments that are legally detachable and separately exercisable from the equity instruments, are immediately exercisable, do not embody an obligation for the Company to repurchase its shares, permit the holders to receive a fixed number of common shares upon exercise, are indexed to the Company's common stock and meet the equity classification criteria. In addition, such Warrants do not provide any guarantee of value or return. The Company valued the Warrants at issuance, concluding their sales price approximated their fair value, and allocated net proceeds from the sale proportionately to the common stock and Warrants, of which $87.7 million, net of issuance costs, was allocated to the Warrants and recorded as a component of additional paid-in-capital.

In September 2021, the Company completed a PIPE financing transaction, in which it sold 5,000,000 shares of its common stock at a price of $11.00 per share pursuant to a securities purchase agreement entered into on September 16, 2021 (the "Second PIPE Financing"). The Company received aggregate net proceeds of approximately $52.7 million after deducting placement agent commissions and offering expenses payable by the Company. In connection with the issuance and sale of the common stock, the Company filed a registration statement with the SEC registering the resale of the shares of common stock issued in the Second PIPE Financing.

In March 2022, the Company filed a Registration Statement on Form S-3 with the SEC (the "2022 Shelf Registration Statement"), covering the offering of up to $250.0 million of common stock, preferred stock, debt securities, warrants and units. The 2022 Shelf Registration Statement included a prospectus supplement covering the issuance and sale of up to $100.0 million of the Company's common stock, from time to time, through an "at-the-market" offering program (the "2022 ATM Offering Program") under the Securities Act. The SEC declared the 2022 Shelf Registration Statement effective as of May 6, 2022.

In connection with the 2022 ATM Offering Program, in March 2022, the Company also entered into a sales agreement (the "2022 Sales Agreement") with Cowen, pursuant to which Cowen will act as the Company's sales agent and, from time to time, offer and sell shares of the Company's common stock having an aggregate offering price of up to $100.0 million. Cowen is entitled to compensation for its services equal to up to 3.0% of the gross proceeds of any shares of common stock sold under the 2022 Sales Agreement. In addition, the Company agreed to reimburse a portion of Cowen's expenses in connection with the 2022 ATM Offering Program up to $50,000. As of September 30, 2022, the Company has received aggregate proceeds from its 2022 ATM Offering Program of $0.2 million, net of commissions and offering costs, pursuant to the issuance of 95,000 shares of its common stock.

Common Stock Warrants

As of September 30, 2022, the following warrants to purchase shares of the Company's common stock were issued and outstanding:

Issue Date	Expiration Date	Exercise Price	Number of Warrants Outstanding
December 28, 2020	None	$ 0.01	13,573,704

During the nine months ended September 30, 2022, 3,442,567 warrants were exercised, resulting in the Company issuing 3,442,567 shares of common stock. No warrants were exercised during the three and nine months ended September 30, 2021.

11. Stock-Based Compensation

Award Incentive Plans

In August 2015, the Company's board of directors approved the 2015 Equity Incentive Plan ("2015 Plan"). In connection with the Company's IPO and the effectiveness of the 2018 Award Incentive Plan ("2018 Plan"), discussed below, the 2015 Plan terminated. The 92,815 shares of common stock that were then unissued and available for future issuance under the 2015 Plan became available under the 2018 Plan.

In September 2018, the Company's board of directors approved the 2018 Plan. Under the 2018 Plan, a total of 2,690,000

shares of common stock were initially reserved for issuance under the 2018 Plan, 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 of common stock reserved for issuance under the 2018 Plan automatically increases on January 1 of each year, beginning on January 1, 2019 and continuing through and including January 1, 2028, by 4% of the total number of shares of the Company's outstanding stock on December 31 of the preceding calendar year, or a lesser number of shares determined by the Company's board of directors. The 2018 Plan provides, among other things, for the grant of options, stock appreciation rights, restricted stock awards, restricted stock unit awards and performance bonus awards.

The maximum number of shares that may be issued upon the exercise of stock options under the 2018 Plan is 45,000,000.

The Company's board of directors has the authority to determine to whom options will be granted, the number of shares, the term, and the exercise price. If an individual owns stock representing 10% or more of the outstanding shares, the price of each share shall be at least 110% of the fair market value, as determined by the board of directors. Options granted have a term of up to 10 years and generally vest over a 4-year period with a straight-line vesting.

Material Features of the 2021 Employment Inducement Incentive Award Plan

In April 2021, the Company's board of directors adopted the 2021 Employment Inducement Incentive Award Plan (the "2021 Plan"), pursuant to Nasdaq Listing Rule 5635(c)(4). The principal purpose of the 2021 Plan is to enhance our ability to attract, retain and motivate employees who are expected to make important contributions to us by providing such individuals with equity ownership opportunities. Awards granted under the 2021 Plan are intended to constitute "employment inducement awards" under Nasdaq Listing Rule 5635(c)(4), and, as such, the 2021 Plan is intended to be exempt from the Nasdaq Listing Rules regarding shareholder approval of stock option and stock purchase plans. A total of 790,400 shares of our common stock (the "Share Limit") were initially reserved for issuance under the 2021 Plan. The Share Limit may be increased by the Company's board of directors. The 2021 Plan provides for the grant of non-qualified stock options, restricted stock units, restricted stock awards, stock appreciation rights, and other stock-based and cash-based awards. The 2021 Plan does not provide for the grant of incentive stock options. Awards under the 2021 Plan may be granted to eligible employees who are either new employees or who are commencing employment with the Company or one of its subsidiaries following a bona fide period of non-employment with the Company, and for whom such awards are granted as a material inducement to commencing employment with the Company or one of its subsidiaries. Awards under the 2021 Plan may not be granted to the Company's consultants or non-employee directors.

The 2021 Plan is administered by our board of directors and, to the extent the Company's board of directors delegates its authority to it, the Company's compensation committee. In the event of a change in control in which the Company's successor refuses to assume or substitute any outstanding award under the 2021 Plan, the vesting of such award will accelerate in full. The Company's board of directors may terminate, amend, or modify the 2021 Plan at any time, provided that no termination or amendment may materially impair any rights under any outstanding award under the 2021 Plan without the consent of the holder.

On April 21, 2022, the Company's board of directors increased the number of shares available under the 2021 Plan by 700,000 shares.

Stock Option Activity

A summary of the 2018 Plan and 2021 Plan activity is as follows:

	Number of Shares Available for Issuance	Options Outstanding			
		Number of Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Balance at December 31, 2021	3,459,187	5,107,335	$ 9.82	8.13	$ 17,153
Authorized	3,461,915	—	$ —		
Granted	(3,289,384)	2,939,211	$ 4.88		
Exercised	—	(140,000)	$ 1.03		
Cancelled	1,054,304	(911,676)	$ 8.61		
Balance at September 30, 2022	4,686,022	6,994,870	$ 8.07	8.22	$ 532
Vested and exercisable at September 30, 2022		3,008,491	$ 9.15	7.24	$ 354
Vested and expected to vest at September 30, 2022		6,400,481	$ 8.19	8.14	$ 504

For the nine months ended September 30, 2022 and 2021, the total intrinsic value of stock option awards exercised was $0.4 million and $5.4 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 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.

As of September 30, 2022, $15.9 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 2.6 years. The total fair value of shares vested during the nine months ended September 30, 2022 was $2.6 million.

Stock-based compensation expense and awards granted to non-employees were $0.5 million and immaterial for the nine months ended September 30, 2022 and 2021.

Restricted Stock Units

We have granted restricted stock unit awards under the 2018 Plan. Our restricted stock unit awards have a term of up to 10 years and generally vest over a 1 or 2-year period. The following table summarizes our restricted stock unit activity during the nine months ended September 30, 2022:

	Number of Shares	Weighted-Average Grant Date Fair Value
Outstanding, unvested at December 31, 2021	708,800	$ 5.29
Issued	350,173	$ 5.46
Vested	(353,300)	$ 5.29
Canceled/Forfeited	(142,628)	$ 5.35
Outstanding, unvested at September 30, 2022	563,045	$ 5.38

Stock-Based Compensation Expense

Total stock-based compensation for all awards granted to employees, consultants and our 2018 Employee Stock Purchase Plan ("ESPP"), before taxes, is as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Research and development expenses	$ 1,615	$ 1,688	$ 5,083	$ 5,033
General and administrative expenses	1,449	1,131	4,466	2,720
Total	$ 3,064	$ 2,819	$ 9,549	$ 7,753

12. Net Loss Per Common 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.

The following table sets forth the computation of the basic and diluted net income (loss) per share (in thousands, except for share and per share amounts):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Numerator:				
Net loss	$ (29,966)	$ (28,118)	$ (88,397)	$ (45,313)
Denominator:				
Weighted-average common shares outstanding, basic and diluted	86,597,405	77,775,497	86,441,212	76,837,503
Net loss per share, basic and diluted	$ (0.35)	$ (0.36)	$ (1.02)	$ (0.59)

In December 2020, the Company issued and sold Warrants to purchase 27,480,719 shares of common stock at a nominal exercise price of $0.01 per share (see Note 10). The shares of common stock into which the Warrants may be exercised are considered outstanding for the purposes of computing earnings per share, because the shares may be issued for little or no consideration, they are fully vested and the Warrants are immediately exercisable upon their issuance date.

During a period of net loss, basic net loss per share is the same as diluted net loss per share, 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:

	September 30,	
	2022	2021
Options issued and outstanding and ESPP shares issuable and outstanding	7,117,085	5,281,474
Restricted stock subject to future vesting	563,045	—
Total	7,680,130	5,281,474

13. Subsequent Events

In October 2022, the Company completed a PIPE financing transaction, in which it sold 6,637,165 shares of its common stock at a price of $2.26 per share and pre-funded warrants to purchase an aggregate of 13,274,923 shares of common stock at a per warrant share price of $2.2599 pursuant to a securities purchase agreement entered into on October 24, 2022. The Company received aggregate gross proceeds of approximately $45.0 million before deducting placement agent commissions and offering expenses. The pre-funded warrants will expire when exercised in full, will have a nominal exercise price of $0.0001 per share, and are immediately exercisable upon issuance. The exercise price and number of shares of Common Stock issuable upon the exercise of the pre-funded warrants will be subject to adjustment in the event of any stock dividends and splits, reverse stock split, recapitalization, reorganization or similar transaction, as described in the pre-funded warrants.

ITEM 2. 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 condensed consolidated financial statements and notes thereto included elsewhere in this report, and our audited financial statements and related notes thereto included as part of our Annual Report on Form 10-K for the year ended December 31, 2021. This discussion and analysis, and other parts of this report, contain forward-looking statements, including, but not limited to, statements related to the potential of Gritstone's programs. Such forward-looking statements involve substantial risks and uncertainties that could cause the outcome of Gritstone's programs, future results, performance or achievements to differ significantly from those expressed or implied by the forward-looking statements, including interim results obtained may differ from those at completion of the studies and clinical trials. Such risks and uncertainties include, among others, the uncertainties inherent in the drug development process, including Gritstone's programs' clinical development, the process of designing and conducting preclinical and clinical trials, the regulatory approval processes, the timing of regulatory filings, the challenges associated with manufacturing drug products, Gritstone's ability to successfully establish, protect and defend its intellectual property and other matters that could affect the sufficiency of existing cash to fund Gritstone's operations. Our actual results could differ materially from those discussed in these forward-looking statements. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to our business in general, see the section titled "Risk Factors". These forward-looking statements speak only as of the date hereof. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason.

Overview

We discover, develop, manufacture and deliver next generation cancer and infectious disease vaccine candidates with the aim of improving patient outcomes and eliminating disease. The immune system sits at the nexus of many diseases, and manipulation of the immune system has enormous potential to drive transformational therapeutic and preventative benefits. Our approach seeks to generate a potent and durable therapeutic or protective immune response by leveraging insights into the immune system's ability to recognize and destroy diseased cells and eliminate virally-infected cells. Specifically, we focus on the induction of T cells, critical but underexplored components in treatment and prevention of disease, to generate differentiated immune responses that extend and improve the quality of life.

Our programs are built on two key platforms. The first platform is our proprietary EDGE™ epitope identification platform, which enables us to identify antigens that can be recognized by the immune system on tumors or virally-infected cells with a high degree of accuracy. The second platform is our potent, flexible, vaccine platform, which we have engineered to deliver immunogens to the immune system to drive the destruction of tumors or virally-infected cells. Our vaccine platform leverages our two proprietary vaccine vectors, self-amplifying mRNA (samRNA) and chimpanzee adenovirus (ChAd). We utilize these "mix and match" vectors in a variety of ways, including as a heterologous prime-boost (one vector followed by the other) or homologous prime-boost (use the same vector twice). Together, these proprietary and synergistic technologies enable us to build robust and distinct pipelines in oncology and infectious disease. Additionally, our in-house manufacturing capabilities enable us to drive down cost and production time, as well as maintain control over intellectual property and product quality of our products.

Self-amplifying mRNA (samRNA)

Our samRNA vector is based on a synthetic RNA molecule derived from a wild-type Venezuelan Equine Encephalitis Virus (VEEV) replicon with the goal of extending the duration and magnitude of immunogen expression to drive potent and durable immune responses. The samRNA is delivered in a lipid nanoparticle (LNP) formulation. Like traditional mRNA vaccines, samRNA vaccines use the host cell's transcription system to produce target antigens to stimulate adaptive immunity. Unlike traditional mRNA, samRNA has an inherent ability to replicate by creating copies of the original strand of RNA once it is in the cell. Potential benefits of samRNA may include extended duration and magnitude of antigen expression, strong and durable induction of neutralizing antibody and T cell immunity (CD4+ and CD8+), dose sparing, and a refrigerator stable product.

The samRNA platform is a key asset for Gritstone. Within our oncology programs, we have presented clinical data supporting the identification and selection of an optimal dosing regimen for our novel samRNA vector against

solid tumors. We also leverage our samRNA platform for infectious diseases, and our preclinical and clinical studies to date demonstrate the potential overall potency and dose sparing opportunity of samRNA in viral diseases.

The success of first-generation mRNA vaccines for SARS-CoV-2 (Comirnaty® and Spikevax) has validated mRNA as a vaccine technology and we believe the samRNA vector has the potential to offer key benefits over mRNA, including dose sparing and more potent CD8+ T cell induction, within both oncology and viral diseases.

Chimpanzee Adenovirus (ChAd)

Chimpanzee Adenoviral (ChAd) vectors have been utilized in clinical studies in infectious disease and oncology over the last 20 years and have been demonstrated to be well tolerated and effective at generating rapid and substantial CD4+ and CD8+ T cell responses. Additionally, ChAd vectors can induce B cell immune responses, i.e., elicit nAbs.

In-house Manufacturing

We manufacture our product candidates at our own fully integrated current good manufacturing practice (cGMP) biomanufacturing facilities. Our ability to control the manufacturing of high-quality tumor-specific immunotherapy and infectious disease vaccine candidates, and scale production, if early data are positive, is critical for efficient clinical development of our vaccine candidates and commercialization.

Our manufacturing know-how also contributes to our translational science and optimization of our production candidates. Through our work, we gain insights from “bench to manufacturing to bedside” and back. We translate such insights across functions and systems to optimize antigen cassette design, dose and vaccine regimen to induce differentiated immune response.

Clinical Programs

The table below summarizes key information about our ongoing clinical trials.

Program	Phase	Status	Indication(s)	Collaborator	Commercial Rights
GRANITE	1/2	Enrollment Complete; Treatment Ongoing	Early stage & advanced solid tumors	—	Gritstone
GRANITE	2/3	Enrolling; Treatment Ongoing	MSS-CRC* first line maintenance	—	Gritstone
GRANITE	2	Terminated	MSS-colon cancer adjuvant	—	Gritstone
SLATE	1/2	Complete	p53, KRAS Advanced Solid Tumors	—	Gritstone
SLATE	2	Enrolling	$KRAS^{mut}$	—	Gritstone
CORAL	1	Enrollment Complete	COVID-19 naïve & booster	NIAID, IDCRC	Gritstone
CORAL	1	Enrollment Complete	COVID-19 booster	—	Gritstone
CORAL	1	Enrolling	COVID-19 in South Africa (naïve, convalescent, HIV+)	CEPI	Gritstone
HIV	1	Ongoing	HIV treatment/cure	Gilead Sciences	Gilead**

* MSS-CRC = microsatellite stable colorectal cancer
** Gilead is responsible for conducting a Phase 1 study

COVID-19 Update

Since the COVID-19 pandemic began, providers of healthcare services have had to deal with significant strains on their operations. These strains have affected all healthcare institutions, including those where we conduct our clinical trials, with some institutions prohibiting or postponing the initiation of new clinical trials, slowing or halting enrollment in existing trials and restricting the on-site monitoring of clinical trials. Although our operations have not been materially impacted by the COVID-19 pandemic, we have experienced slowing of patient recruitment and sample collection in our ongoing clinical trials. Additionally, as a result of the COVID-19 pandemic, competition for potential patients in our trials may be further exaggerated as a result of multiple clinical site closures. To date, the COVID-19 pandemic has not materially affected our supply chain or production schedule, but further escalation of the health

crisis has the potential to cause delays in our supply chain and manufacturing operations, which could materially adversely impact our business.

In response to the COVID-19 pandemic, we have implemented heightened health and safety measures designed to comply with applicable federal, state and local guidelines, and transitioned to a flexible work environment, where employees who can work from home effectively are allowed to do so. We have implemented virtual meeting and messaging technology and encourage employees to follow local health authority guidance. As the pandemic and its impacts continue to evolve, we may need to undertake additional actions that could impact our operations if required by applicable laws or regulations or if we determine such actions to be in the best interests of our employees.

Oncology Program Updates

We are developing a portfolio of vaccine-based cancer immunotherapy product candidates using a heterologous prime (ChAd)/boost (samRNA) approach aimed at the highly targeted activation of tumor-specific neoantigens (TSNA) in solid tumors. Our two clinical-stage programs (GRANITE, which is "individualized" and SLATE, which is "off-the-shelf") aim to induce a substantial neoantigen-specific CD8+ T cell response using neoantigen-containing immunotherapies. GRANITE patients receive a product candidate made specifically for them, based upon their tumor DNA/RNA sequence. In contrast, SLATE patients receive an off-the-shelf product candidate made for a subset of patients based on common driver mutations.

GRANITE Individualized Vaccine Program for Solid Tumors

Our first oncology program, GRANITE, consists of individualized neoantigen-based immunotherapy candidates for solid tumors. GRANITE was granted Fast Track designation by the FDA for the treatment of microsatellite stable colorectal cancer (MSS-CRC).

In an ongoing Phase 1/2 study evaluating GRANITE in combination with checkpoint inhibitors for patients with MSS-CRC that have been treated with FOLFOX/FOLFIRI therapy as well as in patients with gastro-esophageal (GEA) cancer that have been treated with platinum-based chemotherapy, GRANITE has shown to be generally well-tolerated, with no dose limiting toxicities, and demonstrated consistent and potent immunogenicity (CD8+ neoantigen-specific T cell induction in all subjects), in addition to tumor lesion size reductions and molecular responses as measured by reduction in circulating tumor DNA (cDNA). Initial results from this study were presented during the European Society of Medical Oncology (ESMO) Congress in September 2021, and follow-up for patients in the study continues. As of the August 5, 2021 data cutoff, 4 of 9 treated patients with MSS-CRC had a molecular response. Patients who demonstrated molecular response had median overall survival of >17 months (median not reached) whereas those without molecular response exhibited a median overall survival of 7.8 months, consistent with expected outcomes in 3rd line treatment of MSS-CRC. As of the next data cutoff on May 9, 2022, the observed median overall survival in this group exceeded 18 months with median OS not yet reached. All patients with MSS-CRC assessed for molecular response and alive at the time of our ESMO 2021 data presentation remained alive after an additional 35 weeks of follow-up. We believe these data demonstrate a correlation between a decrease in ctDNA and extended overall survival. Interim results from the Phase 1/2 study were published in Nature Medicine in August 2022 ("Individualized, heterologous chimpanzee adenovirus and self-amplifying mRNA neoantigen vaccine for advanced metastatic solid tumors: phase 1 trial interim results").

In the first quarter of 2022, we initiated a randomized Phase 2/3 study (GRANITE-CRC-1L, NCT05141721), evaluating GRANITE as a maintenance treatment in patients with newly diagnosed, metastatic MSS-CRC who have completed FOLFOX-bevacizumab induction therapy. This Phase 2/3 study has registrational intent and has been discussed with the FDA. In support of this study, we entered into a clinical trial collaboration and supply agreement with F. Hoffman-La Roche Ltd to evaluate the safety and tolerability of GRANITE in combination with TECENTRIQ (atezolizumab). Enrollment in GRANITE-CRC-1L study is ongoing, and the first patient was treated in July 2022. Initial data from GRANITE-CRC-1L are expected in the fourth quarter of 2023. In August 2022, we terminated the GRANITE-ADJUVANT study (NCT05456165), a randomized Phase 2 trial evaluating GRANITE in patients with stage II/III colon cancer who are circulating tumor DNA (ctDNA)+ after definitive surgery, due to reprioritization of resources. No patients had been enrolled at the time of study termination.

SLATE "Off the shelf" Vaccine Program for Solid Tumors

Our second oncology program, SLATE, consists of "off-the-shelf", TSNA-directed immunotherapy product candidates. SLATE contains a fixed cassette with TSNA that are shared across a subset of cancer patients rather than a cassette unique to an individual patient, which distinguishes it as a potential off-the-shelf alternative candidate to

GRANITE. Our long-term vision for the SLATE program is to develop a suite of novel vaccine candidates that target common tumor antigens to broaden addressable patient population and drive multiple antigens per patient.

The first version of SLATE (SLATE v1) was studied in a Phase 1/2 study, in collaboration with Bristol-Myers Squibb, in 26 patients with metastatic solid tumors, most of whom had KRAS-mutant tumors largely focused on non-small cell lung cancer (NSCLC), MSS-CRC, and pancreatic ductal adenocarcinoma. In the initial part of this study, which was focused on KRAS and p53 mutations, SLATE v1 demonstrated induction of CD8+ T cells against multiple KRAS driver mutations, and greatest activity was observed in a subset of NSCLC patients with the KRASmut G12C mutations. Although these initial outcomes were promising, we believed our SLATE candidate could be further optimized to maximize potential clinical benefit.

Subsequently, we developed a next-generation, optimized SLATE candidate, SLATE-KRAS, (formerly referred to as SLATE v2) that exclusively includes epitopes from mutated KRAS and exhibited immunogenic superiority over v1 in human HLA-transgenic mice. SLATE-KRAS is now in Phase 2 testing under the same IND and protocol as SLATE v1 in patients with advanced NSCLC and CRC. We disclosed the initial results from the Phase 2 portion of the Phase 1/2 study, including data from both SLATE v1 and SLATE-KRAS, at the 2022 AACR Annual Meeting in April 2022 and at the 2022 ESMO Congress in September 2022. These data demonstrate a favorable safety and tolerability profile, support the potential of SLATE-KRAS to drive stronger CD8+ T cell responses to mutant KRAS than SLATE v1 and provide early signals of efficacy as measured by reduction in ctDNA (molecular response). Specifically, we saw a molecular response rate (MRR) of 39% in evaluable patients with advanced NSCLC and CRC, a figure consistent with the MRR seen in the Phase 1/2 studies of GRANITE (MRR of 44%). We believe these initial data also demonstrate a correlation between molecular response and overall survival (OS) among patients with NSCLC. Based on these data, we have begun evaluating moving SLATE-KRAS into additional studies and earlier lines of treatment.

Infectious Disease Program Updates

In early 2021, we initiated two programs in infectious diseases: CORAL, a second-generation prophylactic program against COVID-19, and a collaboration with Gilead Sciences to develop a therapeutic vaccine against HIV. Our infectious disease programs aim to deliver vaccine candidates that induce both B cell and T cell immunity with the potential to drive potent and durable immune response that can be applied for either protective or therapeutic benefit. This approach has demonstrated the ability to generate robust CD8+ T cells and neutralizing antibodies against SARS-CoV-2 in multiple preclinical and clinical studies and is being evaluated against multiple other pathogens in Gritstone-owned and partnered studies. We believe that initially evaluating our approach in SARS-CoV-2 can provide proof of concept for a number of infectious diseases.

CORAL – Second Generation COVID-19 Vaccine Program

Our CORAL program is a second-generation SARS-CoV-2 vaccine platform delivering spike and additional SARS-CoV-2 T cell epitopes. We believe this approach of inducing both neutralizing antibodies and T cell responses could offer the potential for more durable protection and broader immunity against SARS-CoV-2 variants than that provided by first-generation SARS-CoV-2 vaccines and serve as a basis for developing a pan-coronavirus vaccine. Within our CORAL program, we developed an optimized samRNA vaccine candidate that we believe is differentiated from first-generation mRNA vaccines. The program is supported by key relationships with the Gates Foundation, the National Institute of Allergy and Infectious Disease (NIAID), the Coalition for Epidemic Preparedness Innovations (CEPI), and through a license agreement with the La Jolla Institute for Immunology (LJI).

We have conducted preclinical studies demonstrating that our SARS-CoV-2 vaccine candidate induced significant and sustained levels of neutralizing antibodies and T cells against the Spike protein, plus a broad T cell response against epitopes from multiple viral genes outside of Spike. Results from one of these studies, a non-human primate challenge study (NHP Challenge Study), were published in Nature Communications in June 2022.

We are currently evaluating four distinct SARS-CoV-2 product candidates across three different Phase 1 clinical trials containing Spike plus additional non-Spike T cell epitope (TCE) sequences (and also full-length nucleocapsid). These studies include homologous and heterologous prime-boost regimens. All of these studies are ongoing and data from all are expected in the fourth quarter of 2022.

In January 2022, we shared data from the first cohort of our Phase 1 CORAL-BOOST study which showed our samRNA vaccine candidate induced robust neutralizing antibody titers and elicited broad T cell responses when

administered at 10ug following two-dose administration of Vaxzervria. The neutralizing antibody titer levels against SARS-CoV-2 Spike protein shared at this time were consistent with published data from higher doses of first-generation mRNA vaccines in a similar clinical context.

In August 2022, we reported 6-month follow-up data from a subset of patients within the first two cohorts of the CORAL-BOOST study who elected to receive only a single 10µg or 30µg samRNA boost vaccination (n=7). The data demonstrated the neutralizing antibody levels reported in January 2022 persisted after 6 months, and durable neutralizing antibodies against wild type Spike as well as key Spike variants of concern (Beta, Delta and Omicron) were observed. Additionally, T cell responses to Spike and non-Spike T cell epitopes (TCEs) remained generally stable over the 6-month observation period.

HIV Vaccine Collaboration with Gilead Sciences

In January 2021, we entered into a collaboration, option and license agreement with Gilead Sciences, Inc. (Gilead) to research and develop a vaccine-based immunotherapy for HIV. Together, we plan to develop an HIV-specific therapeutic vaccine using our proprietary prime-boost vaccine platform, comprised of samRNA and adenoviral vectors, with antigens developed by Gilead. The collaboration and the program are progressing well and a Phase I trial is ongoing. If Gilead decides to progress development beyond the Phase 1 study by exercising their exclusive option, the Company will receive a $40.0 million non-refundable option exercise fee.

Preclinical Research Updates

Beyond GRANITE, SLATE, CORAL and the collaboration with Gilead, we continue to apply our broad set of capabilities in oncology and infectious diseases through promising preclinical work and partnerships. These projects include a pan-coronavirus program, a flu program, and a program aiming to develop an optimal immunogen in the context of human papillomavirus (HPV), which is supported by the Gates Foundation.

Components of Our Operating Results

Collaboration and Grant Revenue

We have no products approved for sale and have never generated any revenue from product sales. For the three and nine months ended September 30, 2022, respectively, we recognized $3.0 million and $15.7 million of revenue from the 2seventy Agreement, the Gilead Collaboration Agreement, and the grant agreements with CEPI and the Gates Foundation. For the three and nine months ended September 30, 2021, we recognized $2.6 million and $45.1 million for the three and nine months ended September 30, 2021, respectively, of revenue from the 2seventy Agreement, the Gilead Collaboration Agreement, another small collaboration agreement, and the grant agreement with CEPI. See Note 9 to our condensed consolidated financial statements for additional information.

In the future, we expect to continue to recognize revenue from the 2seventy Agreement and the Gilead Collaboration Agreement and may generate revenue from product sales or other collaboration agreements, strategic alliances and licensing arrangements. We expect our revenue to fluctuate on a quarterly and annual basis due to the timing and amount of license fees, reimbursement of costs incurred, milestone and other payments, as well as product sales, to the extent that any are successfully commercialized. If we fail to complete the development of our product candidates in a timely manner or obtain regulatory approval for them, our ability to generate future revenue, and our results of operations and financial position, would be materially adversely affected.

Operating Expenses

Research and Development Expenses

Since our inception, we have committed significant resources to our research and development activities, including conducting preclinical studies, manufacturing development efforts and related development activities for our product candidates.

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 arrangements 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 (i) headcount-related expenses, such as salaries, payroll taxes, benefits, non-cash stock-based compensation and travel, for employees contributing to research and (ii) 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.

Pursuant to our Arbutus License Agreement, Arbutus granted 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. During the nine months ended September 30, 2022 and 2021, we had no research and development expense under the agreement.

Pursuant to our 2020 Genevant License Agreement, Genevant granted us exclusive license rights under certain intellectual property related to Genevant's LNP technology for a single indication, and we agreed to pay Genevant an initial payment of $2.0 million, and up to an aggregate of $71.0 million in specified development, regulatory, and commercial milestones, and low to mid-single digit royalties on net sales of licensed products. The upfront payment of $2.0 million was included in research and development expenses during 2020. In March 2022, a milestone in the amount of $1.0 million was met, which was included in research and development expense for the nine months ended September 30, 2022.

Pursuant to our 2021 Genevant License Agreement, we obtained a nonexclusive license to Genevant's LNP technology to develop and commercialize self-amplifying RNA, or samRNA, vaccines against SARS-CoV-2, the virus that causes COVID-19. Under the 2021 Genevant License Agreement, we made a $1.5 million upfront payment to Genevant, and Genevant is eligible to receive from us up to $141.0 million in contingent milestone payments per product, plus certain royalties on future product sales or licensing (or, in certain scenarios and subject to certain conditions, in lieu of these milestones and royalties Genevant would receive a percentage of amounts we receive from sublicenses). In March 2021, a milestone was met following the initial patient treatment in the Phase 1 clinical trial conducted through the NIAID-supported IDCRC. Both the $1.5 million upfront and $1.0 million milestone payments were recorded as research and development expense for the nine months ended September 30, 2021. No research and development expense was recorded for the nine months ended September 30, 2022.

We expect our research and development expenses to increase substantially in the future as we continue to advance our product candidates into and through clinical studies and pursue regulatory approval. Such activities are costly and time-consuming and we expect our clinical studies to generally become larger and more costly to conduct as they advance into later stages. 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 described in the section entitled "*Risk Factors*" included in Part II, Section 1A and elsewhere in this report.

The following table summarizes our research and development expenses by program and category (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
GRANITE program external expenses	$ 3,088	$ 3,387	$ 9,232	$ 8,767
SLATE program external expenses	604	1,024	2,076	2,935
CORAL program external expenses	2,802	1,193	9,002	2,828
Other program external research and development expenses	5,463	5,996	17,702	19,533
Personnel-related expenses [(1)]	10,159	8,624	31,117	25,171
Other unallocated research and development expenses	4,320	4,172	12,854	12,090
Total research and development expenses	$ 26,436	$ 24,396	$ 81,983	$ 71,324

(1) Personnel-related expenses include stock-based compensation expense of $1.6 million and $5.1 million, respectively, for the three and nine months ended September 30, 2022, and $1.7 million and $5.0 million, respectively, for the three and nine months ended September 30, 2021.

Since our research and development employees and infrastructure resources are utilized across our development programs, we do not track internal related expenses on a program-by-program basis.

General and Administrative Expenses

Our general and administrative expenses consist primarily of salaries and related costs, including, but not limited to, 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 Select 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

Interest income consists primarily of interest income and investment income earned on our cash, cash equivalents and marketable securities.

Interest Expense

Interest expense consists of interest expense related to our debt facility. A portion of the interest expense is non-cash expense relating to the accretion of the final payment fees and amortization of debt discount and debt issuance costs associated with the Loan Agreement (as defined below).

Results of Operations

Comparison of the Three and Nine Months Ended September 30, 2022 and 2021

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

	Three Months Ended September 30,		
	2022	2021	Change
Revenues:			
Collaboration and license revenues	$ 436	$ 2,401	$ (1,965)
Grant revenues	2,585	213	2,372
Total revenues	3,021	2,614	407
Operating expenses:			
Research and development	26,436	24,396	2,040
General and administrative	6,462	6,373	89
Total operating expenses	32,898	30,769	2,129
Net loss from operations	(29,877)	(28,155)	(1,722)
Interest income	462	37	425
Interest expense	(551)	—	(551)
Net loss	$ (29,966)	$ (28,118)	$ (1,848)

	Nine Months Ended September 30,		
	2022	2021	Change
Revenues:			
Collaboration and license revenues	$ 7,942	$ 44,937	$ (36,995)
Grant revenues	7,741	213	7,528
Total revenues	15,683	45,150	(29,467)
Operating expenses:			
Research and development	81,983	71,324	10,659
General and administrative	22,209	19,251	2,958
Total operating expenses	104,192	90,575	13,617
Net loss from operations	(88,509)	(45,425)	(43,084)
Interest income	663	112	551
Interest expense	(551)	—	(551)
Net loss	$ (88,397)	$ (45,313)	$ (43,084)

Collaboration and License and Grant Revenues

Collaboration and license revenues from our collaboration arrangements and grant revenues were $3.0 million and $15.7 million for the three and nine months ended September 30, 2022, respectively. During the three months ended September 30, 2022, we recognized $0.2 million in collaboration revenue related to the 2seventy Agreement, $0.2 million in collaboration revenue related to the Gilead Collaboration Agreement, $2.3 million in grant revenue from the CEPI Funding Agreement, and $0.3 million in grant revenue from the Gates Foundation. During the nine months ended September 30, 2022, we recognized $6.5 million in collaboration revenue related to the 2seventy Agreement, $1.5 million in collaboration revenue related to the Gilead Collaboration Agreement, $6.9 million in grant revenue from the CEPI Funding Agreement, and $0.8 million in grant revenue from the Gates Foundation. The amount of collaboration revenue recognized related to the 2seventy Agreement during the nine months ended September 30, 2022 included cumulative catch-up adjustments increasing contribution revenue by $5.5 million due to revisions to estimated costs to complete the remaining performance obligation.

Collaboration and license revenues from our collaboration arrangements and grant revenues were $2.6 million and $45.1 million for the three and nine months ended September 30, 2021, respectively. During the three months ended September 30, 2021, we recorded $1.6 million in collaboration revenue related to the Gilead Collaboration Agreement, $0.8 million in collaboration revenue related to the 2seventy Agreement, and $0.2 million in grant revenue related to the CEPI agreement. During the nine months ended September 30, 2021, we recorded $38.6 million in license revenue and $4.1 million in collaboration revenue related to the Gilead Collaboration Agreement, $2.1 million

in collaboration revenue related to the 2seventy Agreement, $0.1 million in collaboration revenue related to another small collaboration agreement, and $0.2 million in grant revenue related to the CEPI agreement.

See Note 9 to our condensed consolidated financial statements for additional information.

Research and Development Expenses

Research and development expenses were $26.4 million and $82.0 million for the three and nine months ended September 30, 2022, respectively, and $24.4 million and $71.3 million for the three and nine months ended September 30, 2021, respectively.

The increase of $2.0 million for the three months ended September 30, 2022 compared to the three months ended September 30, 2021 was primarily due to increases of $1.6 million in personnel-related expenses, $1.0 million in outside services, consisting primarily of clinical trial and other chemistry, manufacturing and controls ("CMC") related expenses, and $0.6 million in facilities-related costs, offset by a decrease of $1.2 million in laboratory supplies.

The increase of $10.7 million for the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 was primarily due to increases of $6.4 million in personnel-related expenses, $7.1 million in outside services, consisting primarily of clinical trial and other CMC related expenses, and $1.7 million in facilities-related costs, offset by decreases of $2.7 million in laboratory supplies and $1.8 million in milestone and license payments.

General and Administrative Expenses

General and administrative expenses were $6.5 million for the three months ended September 30, 2022 compared to $6.4 million for the three months ended September 30, 2021. The increase of $0.1 million was primarily attributable to an increase of $0.7 million in personnel-related expenses, offset by decreases of $0.4 million in outside services and $0.2 million in facilities-related costs.

General and administrative expenses were $22.2 million for the nine months ended September 30, 2022 compared to $19.2 million for the nine months ended September 30, 2021. The increase of $3.0 million was primarily attributable to increases of $3.7 million in personnel-related expenses, offset by decreases of $0.4 million in outside services and $0.3 million in facilities-related costs.

Interest Income

Interest income was $0.5 million and $0.7 million for the three and nine months ended September 30, 2022, respectively. Interest income was immaterial and $0.1 million for the three and nine months ended September 30, 2021, respectively. The income for both periods represent interest and investment income from cash, cash equivalents and marketable securities.

Interest Expense

Interest expense was $0.6 million for the three and nine months ended September 30, 2022. There was no interest expense for the three and nine months ended September 30, 2021. The interest expense is comprised of the contractual coupon interest expense, the amortization of the debt discount and issuance costs and the accretion of the final payment fee associated with the Loan Agreement (as defined below).

Liquidity and Capital Resources

Sources of Liquidity

Since our inception, we have funded our operations primarily through sales of our convertible preferred stock, sales of our common stock in public offerings and under our "at-the-market" offering programs, private placements of our common stock and pre-funded warrants, proceeds from the Loan Agreement (as defined below), and our collaborations, including with the receipt of proceeds under the 2seventy Agreement and the Gilead Collaboration Agreement, and non-dilutive grants from various nonprofit organizations. As of September 30, 2022, we had cash, cash equivalents, and marketable securities of $139.8 million and an accumulated deficit of $489.8 million, compared to cash, cash equivalents, and marketable securities of $206.3 million and an accumulated deficit of $401.4 million as of December 31, 2021. We expect that our cash, cash equivalents, and marketable securities as of September 30, 2022

will enable us to fund our current and planned operating expenses and capital expenditures for at least the next 12 months from the date of the filing of this report.

In October 2019, we filed the 2019 Shelf Registration Statement, covering the offering of up to $250.0 million of various equity and debt securities, including the sale and issuance of up to $75.0 million worth of shares of our common stock under the 2019 ATM Offering Program. Through September 30, 2022, we have received aggregate proceeds from our 2019 ATM Offering Program of $50.0 million, net of commissions and offering costs, pursuant to the issuance of 5,642,712 shares.

In March 2022, we filed the 2022 Shelf Registration Statement, covering the offering of up to $250.0 million of various equity and debt securities, including the sale and issuance of up to $100.0 million worth of shares of our common stock under the 2022 ATM Offering Program. As of September 30, 2022, we have received $0.2 million in gross proceeds from our 2022 ATM Offering Program and have $99.8 million available thereunder.

In April 2022, we received the second tranche payment of $2.7 million under the CEPI Funding Agreement.

In July 2022, we entered into a loan and security agreement (the "Loan Agreement") with Hercules Capital, Inc. ("Hercules") and Silicon Valley Bank ("SVB"), which provides us with a 60-month term loan facility for the Company up to $80.0 million in borrowing capacity across five potential tranches. At the closing of the Loan Agreement, we drew $20.0 million from the first tranche, and we can draw up to an additional $10.0 million through March 2023. The remaining tranches provide up to $50.0 million borrowing capacity and become available if and when we meet certain milestones set forth in the Loan Agreement. The term loan is secured by substantially all of our assets, other than intellectual property. There are no warrants associated with the Loan Agreement.

Borrowings under the Loan Agreement bear interest (i) at an annual cash rate equal to the greater of (x) the lesser of (1) the prime rate (as customarily defined) and (2) 5.50%, in either case, plus 3.15%, and (y) 7.15% and (ii) at an annual payment-in-kind rate, which may equal 2.00%. We are required to make monthly interest-only payments prior to the amortization date of January 1, 2025, subject to a potential six-month and one-year extension upon satisfaction of certain conditions. We will also be required to pay a facility charge equal to 0.50% of the principal amount of any borrowings made pursuant to the last four tranches.

All unpaid principal and accrued and unpaid interest with respect to each term loan is due and payable in full on July 19, 2027. At our option, we may prepay all or any portion of the outstanding borrowings, plus accrued and unpaid interest thereon and fees and expenses, subject to a prepayment premium ranging from zero to 2.5%, during the first three years after closing, depending on the year of such prepayment. Upon repayment of the term loan, we will be required to make a final payment fee to the lenders equal to 5.75% of the aggregate original principal amount of the loan.

Beginning on April 1, 2023, so long as our market capitalization is equal to or less than $400.0 million, we are subject to a minimum liquidity requirement equal to the then outstanding balance under the Loan Agreement multiplied by 0.55 or 0.45, which multiplier depends on whether we achieve certain performance milestones. Our obligations under the Loan Agreement are subject to acceleration upon the occurrence of customary events of default, including payment default, insolvency and the occurrence of certain events having a material adverse effect, including (but not limited to) material adverse effects upon the business, operations, properties, assets or financial condition of us and our subsidiaries, taken as a whole.

Future Funding Requirements

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 cancer immunotherapy candidates, including conducting ongoing research and development, clinical and preclinical studies and providing general and administrative support for these operations. We do not have any products approved for sale, and 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 additional significant collaboration or grant agreements with third parties, and we do not know when, or if, either will occur. We expect to continue to incur net operating losses for at least the next several years and we expect the losses to increase as we advance our CORAL, GRANITE, and SLATE programs, as well as 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. 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, we incur substantial 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 immunotherapy product candidates or from additional significant collaboration or license agreements with third parties, if ever, we expect to finance our future cash needs through private and public equity offerings, including our "at-the-market" offering programs, debt financings, and potential future collaboration, license and development agreements. 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 $489.8 million through September 30, 2022. We expect to incur substantial additional losses in the future as we conduct and expand our research and development activities. We believe that our existing cash, cash equivalents and marketable securities will be sufficient to enable us to fund our projected operations through at least the next twelve (12) months from the date of this Quarterly Report on Form 10-Q. 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 product candidates, and of conducting preclinical studies and clinical trials, including our clinical trials for GRANITE, SLATE and CORAL;
- the timing of, and the costs involved in, obtaining regulatory approvals for our oncology and infectious disease immunotherapy product candidates; in particular, any costs incurred in connection with any future regulatory requirements that may be imposed by the FDA or foreign regulatory bodies;
- 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;
- potential delays in our ongoing clinical trials as a result of the COVID-19 pandemic;
- the cost of manufacturing our 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 costs 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 for each of the periods presented below (in thousands):

	Nine Months Ended September 30,	
	2022	**2021**
Cash used in operating activities	$ (85,572)	$ (26,899)
Cash provided by (used in) investing activities	33,188	(71,927)
Cash provided by financing activities	18,733	75,883
Net decrease in cash and cash equivalents	$ (33,651)	$ (22,943)

Cash Used in Operating Activities

During the nine months ended September 30, 2022, cash used in operating activities was $85.6 million, which consisted of net loss of $88.4 million, adjusted by non-cash charges of $21.6 million and net changes in our operating assets and liabilities of $18.8 million. The non-cash charges consisted primarily of depreciation and amortization expense of $4.8 million, stock-based compensation of $9.5 million, non-cash operating lease expense of $6.9 million and net amortization of premiums, discounts on marketable securities of $0.3 million, and amortization of debt discount and issuance costs of $0.1 million. The change in our operating assets and liabilities was primarily due to decreases of $11.6 million in deferred revenue, $0.2 million in accrued compensation, $6.5 million in lease liability, $0.9 million in accounts payable, and $3.2 million in deposits and other long term assets, offset by increases of $1.5 million in accrued and other non-current liabilities, $1.3 million in accrued research and development expenses, and $0.8 million in prepaid expenses and other current assets.

During the nine months ended September 30, 2021, cash used in operating activities was $26.9 million, which consisted of net loss of $45.3 million, adjusted by non-cash charges of $18.8 million and net changes in our operating assets and liabilities of $0.4 million. The non-cash charges consisted primarily of depreciation and amortization expense of $4.8 million, stock-based compensation of $7.8 million, non-cash operating lease expense of $5.7 million and net amortization of premiums and discounts on marketable securities of $0.5 million. The change in our operating assets and liabilities was primarily due to decreases of $5.9 million in lease liability, $0.9 million in accounts payable and $0.2 million in accrued compensation, and increases of $3.5 million in prepaid expenses and other current assets and $0.3 million in deposits and other long-term assets, offset by increases $8.9 million in deferred revenue, $1.5 million in accrued research and development and $0.1 million in accrued and other non-current liabilities.

Cash Provided by (Used in) Investing Activities

During the nine months ended September 30, 2022, cash provided by investing activities was $33.2 million which consisted of $102.2 million in proceeds from the maturity of marketable securities, offset by $64.6 million in purchases of marketable securities and $4.4 million of capital expenditures to purchase property and equipment.

During the nine months ended September 30, 2021, cash used in investing activities was $71.9 million, which consisted of $133.4 million in purchases of marketable securities and $4.1 million of capital expenditures to purchase property and equipment, offset by $59.4 million in proceeds from the maturity of marketable securities and $6.2 million from sales of marketable securities.

Cash Provided by Financing Activities

During the nine months ended September 30, 2022, cash provided by financing activities was $18.7 million, which primarily consisted of $19.2 million in proceeds from long-term debt, $0.2 million in proceeds from the 2022 ATM Offering Program, $0.2 million in proceeds from the issuance of common stock from option and warrant exercises and $0.3 million in proceeds from issuance of common stock under the employee stock purchase plan, offset by $0.9 million in tax withholding on vesting of restricted stock units, $0.1 million in payment of financing costs, and $0.2 million in payment of financing lease.

During the nine months ended September 30, 2021, cash provided by financing activities was $75.9 million, which primarily consisted of $21.2 million in proceeds from the issuance of common stock pursuant to the Gilead Stock Purchase Agreement, $55.0 million in proceeds from the Second PIPE Financing, $0.3 million in proceeds from the issuance of common stock under the employee stock purchase plan, $2.3 million in proceeds from the issuance of common stock through the 2019 ATM Offering Program and $3.1 million in proceeds from the exercise of stock options, warrants and other, offset by $6.0 million in financing and offering costs.

Off-Balance Sheet Arrangements

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

Contractual Obligations and Commitments

We lease office, laboratory and storage space in facilities at several locations in California and Massachusetts. The terms of our lease agreements have expiration dates between 2023 to 2033. The total future minimum lease payments under the agreements are $108.1 million, of which $2.5 million of the payments are due in the fourth quarter of 2022. See Note 6 to our condensed consolidated financial statements.

We are party to license agreements pursuant to which we have in-licensed various intellectual property rights. These 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. During the nine months ended September 30, 2022 and 2021, 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 9 to our condensed consolidated 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 antibody drug candidates. In June 2022, we notified the CRO of our intent to terminate the agreement effective in August 2022. During the three and nine months ended September 30, 2022, we had no research and development expense under this agreement. During the three and nine months ended September 30, 2021, we had immaterial research and development expense under this agreement. 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 September 30, 2022. 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.

In May 2019, we entered into a contract research and testing agreement with another third-party CRO to provide antibody discovery related services. In March 2022, we notified such CRO of our intent to terminate the agreement effective as of May 17, 2022. Under the agreement, we are obligated to pay such CRO certain milestone payments of up to $34.8 million on achievement of specified events. None of these events had occurred as of September 30, 2022. No research and development expense was recorded under the agreement during the three and nine months ended September 30, 2022 and 2021.

From time to time, in the normal course of business, we enter into contracts with CROs for clinical trials, CMOs for clinical supply manufacturing and with vendors for preclinical research studies and other services and products for operating purposes, which generally provide for termination within 30 days of notice. Therefore, all such contracts are cancelable contracts and 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 unaudited condensed consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States, or U.S. 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.

There have been no changes to our critical accounting policies since we filed our Annual Report on Form 10-K for the year ended December 31, 2021 with the SEC on March 10, 2022. For a description of our critical accounting policies, please refer to our Annual Report on Form 10-K we filed with the SEC on March 10, 2022.

Recent Accounting Pronouncements

Refer to "Note 2. Summary of Significant Accounting Policies" in the notes to our unaudited interim condensed consolidated financial statements in Part I, Item 1 of this report, for a discussion of recent accounting pronouncements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Risk

There have been no material changes in market risk from the information provided in "Item 7A. Quantitative and Qualitative Disclosures About Market Risk" in our Annual Report on Form 10-K for the year ended December 31, 2021, as amended by Amendment No. 1 to our Annual Report on Form 10-K/A for the year ended December 31, 2021.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

As of September 30, 2022, our management, with the participation of our principal executive, financial and accounting officers, performed an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act. Our disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including the principal executive, financial and accounting officers, to allow timely decisions regarding required disclosures.

Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objective, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of September 30, 2022, the design and operation of our disclosure controls and procedures were effective at a reasonable assurance level.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(e) and 15d-15(e) of the Exchange Act that occurred during the nine months ended September 30, 2022 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1. 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 the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

ITEM 1A. 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 report, 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, in Part I, Item 1A of our Annual Report on Form 10-K filed with the SEC on March 10, 2022 or in Part II, Item 1A of our Quarterly Report on Form 10-Q filed on August 4, 2022, 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. Many of the following risks and uncertainties are, and will be, exacerbated by the COVID-19 pandemic and any worsening of the global business and economic environment as a result. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations.

There have been no material changes to the risk factors set forth in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2021 filed with the SEC on March 10, 2022, as updated by the risk factors set forth in Part II, Item 1A of our Quarterly Report on Form 10-Q for the six months ended June 30, 2022 filed with the SEC on August 4, 2022.

ITEM 2. Unregistered Sales of Equity Securities and Use of Proceeds

Unregistered Sales of Equity Securities

Not applicable.

Use of Proceeds

Not applicable.

Issuer Purchases of Equity Securities

Not applicable.

ITEM 3. Defaults Upon Senior Securities

None.

ITEM 4. Mine Safety Disclosures

Not applicable.

ITEM 5. Other Information

None.

ITEM 6. EXHIBITS

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith
		Form	Date	Number	
3.1(a)	Amended and Restated Certificate of Incorporation.	8-K	10/02/2018	3.1	
3.1(b)	Certificate of Amendment to Amended and Restated Certificate of Incorporation.	8-K	05/06/2021	3.1	
3.2	Amended and Restated Bylaws.	8-K	05/06/2021	3.2	
4.1	Reference is made to exhibits 3.1 through 3.2.				
4.2	Form of Common Stock Certificate.	S-1/A	09/17/2018	4.2	
4.3	Description of Common Stock.	10-K	03/10/2022	4.3	
10.1#	Loan and Security Agreement between the Company, Hercules Capital, Inc. and Silicon Valley Bank and certain other parties thereto, dated as of July 19, 2022.				X
31.1	Certification of Chief Executive Officer of Gritstone bio, Inc., as required by Rule 13a-14(a) or Rule 15d-14(a) under the Securities Exchange Act of 1934, as amended.				X
31.2	Certification of Chief Financial Officer of Gritstone bio, Inc., as required by Rule 13a-14(a) or Rule 15d-14(a) under the Securities Exchange Act of 1934, as amended.				X
32.1*	Certification by the Chief Executive Officer and Chief Financial Officer, as required by Rule 13a-14(b) or Rule 15d-14(b) under the Securities Exchange Act of 1934, as amended, and Section 1350 of Chapter 36 of Title 18 of the United States Code (18 U.S.C. §1350).				X
101.INS	Inline XBRL Instance Document				X
101.SCH	Inline XBRL Taxonomy Extension Schema Document				X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document				X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document				X
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document				X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document				X
104	The cover page from the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2022 has been formatted in Inline XBRL.				X

* The certification attached as Exhibit 32.1 that accompanies this report is not deemed filed with the SEC and is not to be incorporated by reference into any filing of Gritstone bio, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Form 10-Q, irrespective of any general incorporation language contained in such filing.

\# Portions of the exhibit have been omitted pursuant to Item 601(b)(10)(iv) of Regulation S-K. A copy of any omitted portions will be furnished to the SEC upon request.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Gritstone bio, Inc.

Date: November 3, 2022

By: /s/ Andrew Allen
Andrew Allen, M.D., Ph.D.
President and Chief Executive Officer
(Principal Executive Officer)

By: /s/ Vassiliki “Celia” Economides
Vassiliki “Celia” Economides
Chief Financial Officer
(Principal Financial Officer)

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

Exhibit 10.1

LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT is made and dated as of July 19, 2022 and is entered into by and among GRITSTONE BIO, INC., a Delaware corporation, each of its Subsidiaries from time to time party hereto as borrower (individually or collectively, as the context may require, "Borrower"), HERCULES CAPITAL, INC., a Maryland corporation ("Hercules"), SILICON VALLEY BANK, a California corporation ("SVB"), and the several banks and other financial institutions or entities from time to time parties to this Agreement (each, a "Lender," and collectively "Lenders"), and Hercules, in its capacity as administrative agent and collateral agent for itself and the Lenders (in such capacity, "Agent").

RECITALS

A. Borrower has requested Lenders to make available to Borrower one or more Advances in an aggregate principal amount of up to $80,000,000; and

B. Lenders are willing to make such Advances on the terms and conditions set forth in this Agreement.

AGREEMENT

NOW, THEREFORE, Borrower, Agent and Lenders agree as follows:

SECTION 1
DEFINITIONS AND RULES OF CONSTRUCTION

1.1 Unless otherwise defined herein, the following capitalized terms shall have the following meanings:

"Account Control Agreement(s)" means any agreement entered into by and among Agent, Borrower and a third party bank or other institution (including a Securities Intermediary) in which Borrower maintains a Deposit Account or an account holding Investment Property and which perfects Agent's first priority security interest in the subject account or accounts.

"ACH Authorization" means the ACH Debit Authorization Agreement in substantially the form of Exhibit G, provided that account numbers shall be redacted for security purposes if and when filed publicly by Borrower.

"Advance" means a Term Loan Advance.

"Advance Date" means the funding date of any Advance.

"Advance Request" means a request for an Advance submitted by Borrower to Agent in substantially the form of Exhibit A, provided that account numbers shall be redacted for security purposes if and when filed publicly by Borrower.

"Affiliate" means (a) any Person that directly or indirectly controls, is controlled by, or is under common control with the Person in question, (b) any Person directly or indirectly owning, controlling or

holding with power to vote 20% or more of the outstanding voting securities of another Person, or (c) any Person 20% or more of whose outstanding voting securities are directly or indirectly owned, controlled or held by another Person with power to vote such securities. As used in the definition of "Affiliate," the term "control" means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a Person, whether through ownership of voting securities, by contract or otherwise.

"Agreement" means this Loan and Security Agreement, as amended, restated, supplemented or otherwise modified from time to time.

"Amortization Date" means January 1, 2025; provided however, (x) if the First Interest Only Extension Conditions are satisfied, then July 1, 2025, and (y) if the Second Interest Only Extension Conditions are satisfied, then January 1, 2026.

"Anti-Corruption Laws" means all laws, rules, and regulations of any jurisdiction applicable to Borrower or any of their respective Affiliates from time to time concerning or relating to bribery or corruption, including without limitation the United States Foreign Corrupt Practices Act of 1977, as amended, the UK Bribery Act 2010 and other similar legislation in any other jurisdictions.

"Anti-Terrorism Laws" means any laws, rules, regulations or orders relating to terrorism or money laundering, including without limitation Executive Order No. 13224 (effective September 24, 2001), the USA PATRIOT Act, the laws comprising or implementing the Bank Secrecy Act, and the laws administered by OFAC.

"Approved Fund" is any (a) Person, investment company, fund, securitization vehicle or conduit that is (or will be) engaged in making, purchasing, holding or otherwise investing in commercial loans and similar extensions of credit in the ordinary course of its business and that is administered or managed by (i) a Lender, (ii) an Affiliate of a Lender, or (iii) a Person (other than a natural person) or an Affiliate of a Person (other than a natural person) that administers or manages a Lender, or (b) any Person (other than a natural person) which temporarily warehouses loans, or provides financing or securitizations, in each case, for any Lender or any entity described in the preceding clause (a).

"Bank Services" means any products, credit services, and/or financial accommodations previously, now, or hereafter provided to Borrower or any of its Subsidiaries by SVB or any SVB Affiliate, including, without limitation, any letters of credit, cash management services (including, without limitation, merchant services, direct deposit of payroll, business credit cards, and check cashing services), interest rate swap arrangements, and foreign exchange services as any such products or services may be identified in SVB's various agreements related thereto (each, a "Bank Services Agreement").

"Bank Services Agreement" has the meaning specified in the definition of Bank Services.

"Bank Services Cap" means One Million Five Hundred Thousand Dollars ($1,500,000.00).

"Bankruptcy Code" means the federal bankruptcy law of the United States as from time to time in effect, currently as Title 11 of the United States Code. Section references to current sections of the Bankruptcy Code shall refer to comparable sections of any revised version thereof if section numbering is changed.

"Blocked Person" means any Person: (a) listed in the annex to, or is otherwise subject to the provisions of, Executive Order No. 13224, (b) a Person owned or controlled by, or acting for or on behalf

of, any Person that is listed in the annex to, or is otherwise subject to the provisions of, Executive Order No. 13224, (c) a Person with which any Lender is prohibited from dealing or otherwise engaging in any transaction by any Anti-Terrorism Law, (d) a Person that commits, threatens or conspires to commit or supports "terrorism" as defined in Executive Order No. 13224, or (e) a Person that is named a "specially designated national" or "blocked person" on the most current list published by OFAC or other similar list.

"Board" means, with respect to any Person that is a corporation, its board of directors, with respect to any Person that is a limited liability company, its board of managers, board of members or similar governing body, and with respect to any other Person that is a legal entity, such Person's governing body in accordance with its Organizational Documents.

"Borrower Products" means all products, software, service offerings, technical data or technology currently being designed, manufactured or sold or that are under clinical investigation or development by Borrower or any of its Subsidiaries or which Borrower or any of its Subsidiaries intends to sell, license, or distribute in the future including any products or service offerings under development, collectively, together with all products, software, service offerings, technical data or technology that have been sold, licensed or distributed by Borrower since formation.

"Business Day" means any day other than Saturday, Sunday and any other day on which banking institutions in the State of California or State of New York are closed for business.

"Cash" means all cash, cash equivalents (which, for the avoidance of doubt, shall include Permitted Investments permitted pursuant to clause (b) of such definition) and liquid funds.

"Cash Prime Rate" means the lesser of (a) the Prime Rate and (b) five and one-half percent (5.50%).

"CFC" means a controlled foreign corporation within the meaning of Section 957(a) of the Code.

"Change in Control" means any (x) reorganization, recapitalization, consolidation or merger (or similar transaction or series of related transactions) of Borrower, sale or exchange of outstanding shares (or similar transaction or series of related transactions) of Borrower in which the holders of Borrower's outstanding shares immediately before consummation of such transaction or series of related transactions do not, immediately after consummation of such transaction or series of related transactions, retain shares representing more than 50% of the voting power of the surviving entity of such transaction or series of related transactions (or the parent of such surviving entity if such surviving entity is wholly owned by such parent), in each case without regard to whether Borrower is the surviving entity or (y) "change of control", "fundamental change," "make-whole fundamental change" or any comparable term under and as defined in any indenture governing any Permitted Convertible Debt has occurred.

"Charter" means, with respect to any Person, such Person's incorporation, formation or equivalent documents, as in effect from time to time.

"Closing Date" means the date of this Agreement.

"Code" means the Internal Revenue Code of 1986, as amended.

"Collateral Claim" means any and all present and future "claims" (used in its broadest sense, as contemplated by and defined in Section 101(5) of the Bankruptcy Code, but without regard to whether such claim would be disallowed under the Bankruptcy Code) of a Lender now or hereafter arising or existing under or relating to this Agreement and related Loan Documents, whether joint, several, or joint and several,

whether fixed or indeterminate, due or not yet due, contingent or non-contingent, matured or unmatured, liquidated or unliquidated, or disputed or undisputed, whether under a guaranty or a letter of credit, and whether arising under contract, in tort, by law, or otherwise, any interest or fees thereon (including interest or fees that accrue after the filing of a petition by or against Borrower under the Bankruptcy Code, irrespective of whether allowable under the Bankruptcy Code), any costs of Enforcement Actions, including reasonable attorneys' fees and costs, and any prepayment or termination premiums.

"Compliance Certificate" means a certificate in the form attached hereto as Exhibit D

"Contingent Obligation" means, as applied to any Person, any direct or indirect liability, contingent or otherwise, of that Person with respect to (i) any Indebtedness, lease, dividend, letter of credit or other obligation of another, including any such obligation directly or indirectly guaranteed, endorsed, co-made or discounted or sold with recourse by that Person, or in respect of which that Person is otherwise directly or indirectly liable; (ii) any obligations with respect to undrawn letters of credit, corporate credit cards or merchant services issued for the account of that Person; and (iii) all obligations arising under any interest rate, currency or commodity swap agreement, interest rate cap agreement, interest rate collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; provided, however, that the term "Contingent Obligation" shall not include endorsements for collection or deposit in the ordinary course of business. The amount of any Contingent Obligation shall be deemed, without duplication of the primary obligation, to be an amount equal to the stated or determined amount of the primary obligation in respect of which such Contingent Obligation is made or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof as determined by such Person in good faith; provided, however, that such amount shall not in any event exceed the maximum amount of the obligations under the guarantee or other support arrangement. For the avoidance of doubt, no Permitted Bond Hedge Transaction, Permitted Warrant Transaction, nor any direct or indirect liability, contingent or otherwise, with respect to any Permitted Transfers, [**], collaboration agreement, business development agreement or similar transaction, will be considered a Contingent Obligation of Borrower.

"Copyright License" means any written agreement granting any right to use any Copyright or Copyright registration, now owned or hereafter acquired by Borrower or in which Borrower now holds or hereafter acquires any interest.

"Copyrights" means all copyrights, whether registered or unregistered, held pursuant to the laws of the United States of America, any State thereof, or of any other country.

"Current Company IP" means each pending, registered, issued or in-licensed Intellectual Property that, individually or taken together with any other such Intellectual Property, is material to the business of Borrower and its Subsidiaries, taken as a whole, relating to the research, development, manufacture, production, use, commercialization, marketing, importing, storage, transport, offer for sale, distribution or sale of the Borrower Products, and is owned or co-owned by or exclusively or non-exclusively licensed to the Borrower or any of its Subsidiaries.

"Deposit Accounts" means any "deposit accounts," as such term is defined in the UCC, and includes any checking account, savings account, or certificate of deposit.

"Domestic Subsidiary" means any Subsidiary organized under the laws of the United States of America, any State thereof, the District of Columbia, or any other jurisdiction within the United States of America.

"Due Diligence Fee" means $35,000, which fee has been paid to Agent prior to the Closing Date, and shall be deemed fully earned on such date regardless of the early termination of this Agreement.

"Enforcement Action" means, with respect to any Lender and with respect to any Collateral Claim of such Lender or any item of Collateral in which such Lender has or claims a security interest lien or right of offset, any action, whether judicial or nonjudicial, to repossess, collect, accelerate, offset, recoup, give notification to third parties with respect to, sell, dispose of, foreclose upon, give notice of sale, disposition, or foreclosure with respect to, or obtain equitable or injunctive relief with respect to, such Collateral Claim or Collateral. The filing, or the joining in the filing, by any Lender of an involuntary bankruptcy or insolvency proceeding against Borrower also is an Enforcement Action.

"Equity Interests" means, with respect to any Person, the capital stock, partnership or limited liability company interest, or other equity securities or equity ownership interests of such Person.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended, and the regulations promulgated thereunder.

"Excluded Account" means any of the following accounts which are designated as such in writing to Agent as of the Closing Date or, with respect to any account opened after the Closing Date, in the next Compliance Certificate delivered after such account is opened: (i) accounts used exclusively to maintain cash collateral subject to a Permitted Lien, (ii) any payroll or benefits account, provided that the aggregate balance of all such accounts shall not exceed the amount of all payroll or related benefit payments required to be made in the two next payroll periods, (iii) any zero balance account, (iv) accounts funded on behalf of employees for the repurchase of stock, and (v) any other deposit accounts, so long as the aggregate amount in all such deposit accounts do not exceed $[**] on any day.

"Excluded Subsidiaries" means all Foreign Subsidiaries and Foreign Subsidiary Holding Companies; provided that in each of the foregoing cases, the Excluded Subsidiary Condition is satisfied with respect to such Subsidiary at all times, and in each case as long as no Excluded Subsidiary owns any Intellectual Property; provided, further, that, for the avoidance of doubt, an Excluded Subsidiary may license Intellectual Property on a non-exclusive basis.

"Excluded Subsidiary Condition" means (a) the aggregate revenues (under GAAP) of all Excluded Subsidiaries does not exceed seven and one-half percent (7.5%) of the consolidated revenues (under GAAP) of Borrower and its Subsidiaries; and (b) value of the total assets of all Excluded Subsidiaries does not exceed seven and one-half percent (7.5%) of the consolidated total assets of Borrower and its Subsidiaries.

"Existing Indebtedness" means the Indebtedness existing on the Closing Date which is disclosed in Schedule 1A .

"FDA" means the U.S. Food and Drug Administration or any successor thereto.

"FDA Laws" means all applicable statutes, rules, regulations, and orders and Requirements of Law administered, implemented, enforced or issued by FDA.

"Federal Health Care Program Laws" means collectively, federal Medicare or federal or state Medicaid statutes, the exclusion laws (42 U.S.C. § 1320a-7), the civil monetary penalties law (42 U.S.C. § 1320a-7a), all federal and state fraud and abuse laws, including, without limitation, the federal Anti-Kickback Statute (42 U.S.C. § 1320a-7b), the Physician Payments Sunshine Act (42 U.S.C. § 1320a-7h), the civil False Claims Act of 1863 (31 U.S.C. § 3729 et seq.), criminal false claims statutes (e.g., 18 U.S.C.

§§ 287 and 1001), the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. § 3801 et seq.), HIPAA, or related regulations or other Requirements of Law applicable to Borrower that directly or indirectly govern the health care industry, programs of governmental authorities related to healthcare, health care professionals or other health care participants, or relationships among health care providers, suppliers, distributors, manufacturers and patients.

"First Interest Only Extension Conditions" shall mean satisfaction of each of the following events: (a) no default or Event of Default shall have occurred and be continuing; and (b) either of Performance Milestone I or Performance Milestone II has been achieved on or prior to December 15, 2024.

"Foreign Subsidiary" means a Subsidiary other than a Domestic Subsidiary.

"Foreign Subsidiary Holding Company" means any Domestic Subsidiary that owns (directly or indirectly) no material assets other than Equity Interests (or Equity Interests and debt interests) of one or more (a) CFCs or (b) other Foreign Subsidiary Holding Companies.

"GAAP" means generally accepted accounting principles in the United States of America, as in effect from time to time.

"Guarantor" means any subsidiary of Borrower that enters into a Guaranty.

"Guaranty" means a guaranty with respect to the Secured Obligations, in form and substance satisfactory to Agent.

[**]

"Indebtedness" means (a) all indebtedness for borrowed money or the deferred purchase price of property or services (excluding trade credit entered into in the ordinary course of business), including reimbursement and other obligations with respect to surety bonds and letters of credit, (b) all obligations evidenced by notes, bonds, debentures or similar instruments, (c) all capital lease obligations, (d) equity securities of any Person subject to repurchase or redemption other than at the sole option of such Person, (e) "earnouts" (to the extent treated as liabilities on the balance sheet in accordance with GAAP), purchase price adjustments, profit sharing arrangements, deferred purchase money amounts and similar payment obligations or continuing obligations of any nature arising out of purchase and sale contracts, (f) non-contingent obligations to reimburse any bank or Person in respect of amounts paid under a letter of credit, banker's acceptance or similar instrument, and (g) all Contingent Obligations. For the avoidance of doubt, no Permitted Bond Hedge Transaction or Permitted Warrant Transaction will be considered Indebtedness of Borrower.

"Initial Facility Charge" means a charge of $150,000.

"Intellectual Property" means all of Borrower's Copyrights; Trademarks; Patents; Licenses; trade secrets and inventions; mask works; Borrower's applications therefor and reissues, extensions, or renewals thereof; and Borrower's goodwill associated with any of the foregoing, together with Borrower's rights to sue for past, present and future infringement of Intellectual Property and the goodwill associated therewith.

"Investment" means any beneficial ownership (including stock, partnership interests, limited liability company interests or other securities) of or in any Person, or any loan, advance or capital contribution to any Person or the acquisition of, or the right to use, develop or sell (in each case, including through licensing), any product that would constitute a Borrower Product upon acquisition.

"IRS" means the United States Internal Revenue Service.

"Joinder Agreement" means for each Subsidiary (other than Excluded Subsidiaries), a completed and executed Joinder Agreement in substantially the form attached hereto as Exhibit G.

"License" means any Copyright License, Patent License, Trademark License or other Intellectual Property license of rights or interests.

"Lien" means any mortgage, deed of trust, pledge, hypothecation, assignment for security, security interest, encumbrance, levy, lien or charge of any kind, whether voluntarily incurred or arising by operation of law or otherwise, against any property, any conditional sale or other title retention agreement, and any lease in the nature of a security interest.

"Loan" means the Advances made under this Agreement.

"Loan Documents" means this Agreement, the promissory notes (if any), the ACH Authorization, the Account Control Agreements, any Joinder Agreements, all UCC Financing Statements, any Bank Services Agreement, the Guaranty (if any) and any other documents executed in connection with the Secured Obligations or the transactions contemplated hereby, as the same may from time to time be amended, modified, supplemented or restated.

"Loan Party" means Borrower or any Guarantor.

"Market Capitalization" means, as of any date of determination, the product of (a) the number of outstanding shares of Gritstone bio, Inc.'s common Equity Interests publicly disclosed in the most recent filing of Gritstone bio, Inc. with the United States Securities Exchange Commission as outstanding as of such date of determination and (b) the closing price of Gritstone bio, Inc.'s common Equity Interests (as quoted on Bloomberg L.P.'s page or any successor page thereto of Bloomberg L.P. or if such page is not available, any other commercially available source).

"Material Adverse Effect" means a material adverse effect upon: (i) the business, operations, properties, assets or financial condition of Borrower and its Subsidiaries taken as a whole; or (ii) the ability of Borrower to perform or pay the Secured Obligations in accordance with the terms of the Loan Documents, or the ability of Agent or Lenders to enforce any of its rights or remedies with respect to the Secured Obligations; or (iii) the Collateral or Agent's Liens on the Collateral or the priority of such Liens.

"Material Agreement" means any license, agreement or other contractual arrangement, the termination of which could be reasonably expected to result in a Material Adverse Effect, individually or in the aggregate.

"Material Regulatory Liabilities" means (i) any liabilities arising from the violation of applicable Public Health Laws, Federal Health Care Program Laws, and other applicable comparable Requirements of Law, or from any requirements imposed relative to any Registrations (including costs of actions required under applicable Requirements of Law, including FDA Laws and Federal Health Care Program Laws, or necessary to remedy any violation of any terms or conditions applicable to any Registrations), including, but not limited to, withdrawal of approval, recall, revocation, suspension, import detention and seizure of any Borrower Product, and (ii) any loss of recurring annual revenues as a result of any loss, suspension or limitation of any Registrations, which, in the case of the foregoing clauses (i) and (ii), could reasonably be expected to result in a Material Adverse Effect.

"Maximum Term Loan Amount" means $80,000,000.

[**]

"Non-Disclosure Agreement" means that certain Non-Disclosure Agreement/Confidentiality Agreement by and between Borrower and Agent dated as of March 29, 2022.

"OFAC" means the U.S. Department of Treasury Office of Foreign Assets Control.

"OFAC Lists" means, collectively, the Specially Designated Nationals and Blocked Persons List maintained by OFAC pursuant to Executive Order No. 13224, 66 Fed. Reg. 49079 (Sept. 25, 2001) and/or any other list of terrorists or other restricted Persons maintained pursuant to any of the rules and regulations of OFAC or pursuant to any other applicable Executive Orders.

"Organizational Documents" means with respect to any Person, such Person's Charter, and (a) if such Person is a corporation, its bylaws, (b) if such Person is a limited liability company, its limited liability company agreement (or similar agreement), and (c) if such Person is a partnership, its partnership agreement (or similar agreement), each of the foregoing with all current amendments or modifications thereto.

"Patent License" means any written agreement granting any right with respect to any invention on which a Patent is in existence or a Patent application is pending, in which agreement Borrower now holds or hereafter acquires any interest.

"Patents" means all letters patent of, or rights corresponding thereto, in the United States of America or in any other country, all registrations and recordings thereof, and all applications for letters patent of, or rights corresponding thereto, in the United States of America or any other country.

"Performance Milestone I" means Borrower shall have [**].

"Performance Milestone II" means (a) Borrower shall have [**] and (b) [**].

"Performance Milestone III" shall mean satisfaction of each of the following events (a) [**] and (b) [**].

"Performance Milestone IV" shall mean satisfaction of each of the following events: (a) [**] and (b) [**].

"Performance Milestone IV Date" means the date on which Borrower achieves Performance Milestone IV.

"Permitted Acquisition" means any acquisition (including without limitation by way of merger or in-licensing arrangement) by Borrower of all or substantially all of the assets of another Person, or of a division or line of business of another Person, or capital stock of another Person, or any product that would constitute a Borrower Product upon acquisition, which is conducted in accordance with the following requirements:

(a) such acquisition is of a business or Person engaged in a line of business substantially related to that of Borrower or its Subsidiaries;

(b) if such acquisition is structured as a stock acquisition, then the Person so acquired shall either (i) become a wholly-owned Subsidiary of Borrower or of a Subsidiary and Borrower shall comply, or cause such Subsidiary to comply, with Section 7.13 hereof or (ii) such Person shall be merged with and into Borrower (with Borrower being the surviving entity);

(c) if such acquisition is structured as the acquisition of assets, such assets shall be acquired by Borrower, and shall be free and clear of Liens other than Permitted Liens;

(d) Borrower shall have delivered to Lenders not less than seven (7) nor more than twenty (20) days prior to the closing date of such acquisition, notice of such acquisition together with pro forma projected financial information, copies of all material documents relating to such acquisition, and historical financial statements for such acquired entity, division or line of business (to the extent applicable), in each case in form reasonably satisfactory to Lenders and demonstrating compliance with the covenants set forth in Section 7.20 hereof on a pro forma basis as if the acquisition occurred on the first day of the most recent measurement period;

(e) both immediately before and after such acquisition no default or Event of Default shall have occurred and be continuing; and

(f) solely with respect to any such acquisition of assets, businesses or business or ownership interests or shares, or any Person so acquired, of another Person or in-licensing of assets of another Person, the sum of the purchase price of such proposed new acquisition or in-licensing, computed on the basis of total consideration actually paid by Borrower with respect thereto, including any contingent or deferred acquisition consideration, and including the amount of Permitted Indebtedness assumed or to which such assets are subject, shall not be greater than $[**] in cash for all such acquisitions or in-licensing transactions during any fiscal year. For the avoidance of doubt, this clause (f) shall not apply to any stock acquisitions.

"Permitted Bond Hedge Transaction" means any call or capped call option (or substantively equivalent derivative transaction) relating to Borrower's common stock (or other securities or property following a merger event or other change of the common stock of Borrower) purchased by Borrower in connection with the issuance of any Permitted Convertible Debt.

"Permitted Convertible Debt" means Indebtedness that is convertible into a fixed number (subject to customary anti-dilution adjustments, "make-whole" increases and other customary changes thereto) of shares of common stock of Borrower (or other securities or property following a merger event or other change of the common stock of Borrower), cash or any combination thereof (with the amount of such cash or such combination determined by reference to the market price of such common stock or such other securities); provided that such Indebtedness shall (a) not require any scheduled amortization or otherwise required payment of principal prior to, or have a scheduled maturity date, earlier than, one hundred eighty (180) days after the Term Loan Maturity Date, (b) be unsecured or subordinated to the Secured Obligations pursuant to terms satisfactory to the Agent in its sole discretion, (c) not be guaranteed by any Subsidiary of Borrower that is not also a Loan Party, and (d) shall be Indebtedness of Gritstone bio, Inc. and not any Subsidiary thereof.

"Permitted Indebtedness" means:

(a) Indebtedness of Borrower in favor of any Lender or Agent arising under this Agreement or any other Loan Document (including Bank Services);

(g) Existing Indebtedness;

(h) Indebtedness of up to $[**] outstanding at any time secured by a Lien described in clause (g) of the defined term "Permitted Liens," provided that such Indebtedness does not exceed the cost of the Equipment or software or other intellectual property financed with such Indebtedness;

(i) (i) Indebtedness to trade creditors incurred in the ordinary course of business and (ii) Indebtedness incurred in the ordinary course of business with corporate credit cards in an aggregate amount not to exceed $[**] outstanding at any time;

(j) Indebtedness that also constitutes a Permitted Investment or is secured by a Permitted Lien;

(k) Subordinated Indebtedness;

(l) reimbursement obligations in connection with (i) letters of credit disclosed in the perfection certificate delivered by Borrower to Agent on the Closing Date that are secured by Cash and issued on behalf of Borrower or a Subsidiary and (ii) such other letters of credit that are secured by Cash and issued on behalf of Borrower or a Subsidiary in an amount not to exceed $[**] at any time outstanding;

(m) intercompany Indebtedness as long as each of the Subsidiary obligor and the Subsidiary obligee under such Indebtedness is a Subsidiary that has executed a Joinder Agreement, or other intercompany Indebtedness resulting from a Permitted Investment in accordance with clause (j) of the defined term "Permitted Investments";

(n) Permitted Convertible Debt in an aggregate principal amount not to exceed $[**] at any one time outstanding;

(o) other unsecured Indebtedness in an amount not to exceed $[**] at any time outstanding; and

(p) extensions, refinancings and renewals of any items of Permitted Indebtedness, provided that the principal amount is not increased or the terms modified to impose materially more burdensome terms upon Borrower or the applicable Subsidiary, as the case may be, and subject to any limitations on aggregate amount of such Indebtedness; and

(q) Indebtedness with respect to a Permitted Royalty Transaction that (a) is subordinated to the Secured Obligations pursuant to a subordination or intercreditor agreement on terms and conditions satisfactory to Agent, (b) is made available pursuant to a royalty agreement on terms and conditions satisfactory to Agent and (c) does not have a scheduled maturity date earlier than one hundred eighty (180) days after the Term Loan Maturity Date.

"Permitted Investment" means:

(a) Investments existing on the Closing Date which are disclosed in Schedule 1B;

(r) (i) marketable direct obligations issued or unconditionally guaranteed by the United States of America or any agency or any State thereof maturing within two years from the date of acquisition thereof currently having a rating of at least A-1 or P-1 from either Standard & Poor's Corporation or Moody's Investors Services, (ii) commercial paper maturing no more than one year from the date of creation

thereof and currently having a rating of at least A-1 or P-1 from either Standard & Poor's Corporation or Moody's Investors Services, (iii) certificates of deposit issued by any bank with assets of at least $500,000,000 maturing no more than one year from the date of investment therein, (iv) money market accounts, (v) corporate bonds maturing no more than two years from the date of acquisition and currently having a rating of A3- or A- from either Moody's or Standard and Poor's, and (vi) Investments pursuant to the investment policy that has been provided to the Agent prior to the Closing Date or any investment policy that has been approved by the Agent;

(s) repurchases of stock of Borrower from former employees, directors, or consultants of Borrower under the terms of applicable repurchase agreements at the original issuance price of such securities in an aggregate amount not to exceed $[**] in any fiscal year, provided that no Event of Default has occurred, is continuing or could exist after giving effect to the repurchases;

(t) Investments accepted in connection with Permitted Transfers;

(u) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of business;

(v) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business, provided that this clause (f) shall not apply to Investments of any Loan Party in any Subsidiary of a Loan Party;

(w) Investments consisting of loans not involving the net transfer on a substantially contemporaneous basis of cash proceeds to employees, officers or directors relating to the purchase of capital stock of Borrower pursuant to employee stock purchase plans or other similar agreements approved by Borrower's Board;

(x) Investments consisting of travel advances in the ordinary course of business;

(y) Investments in newly-formed Domestic Subsidiaries, provided that each such Domestic Subsidiary enters into a Joinder Agreement promptly after its formation and executes such other documents as shall be reasonably requested by Agent;

(z) Investments in Foreign Subsidiaries not to exceed $[**] per fiscal year;

(aa) joint ventures or strategic alliances in the ordinary course of business consisting of the licensing of technology, the development of technology or the providing of technical support as permitted hereunder, provided that cash Investments (if any) by Borrower or the applicable Subsidiary do not exceed $[**] in the aggregate in any fiscal year;

(bb) Investments constituting Permitted Acquisitions;

(cc) Borrower's entry into (including payments of premiums in connection therewith), and the performance of obligations under any Permitted Bond Hedge Transactions and Permitted Warrant Transactions in accordance with their terms; and

(dd) additional Investments that do not exceed $[**] in the aggregate.

"Permitted Liens" means:

(a) Liens in favor of Agent;

(ee) Liens existing on the Closing Date which are disclosed in Schedule 1C;

(ff) Liens for taxes, fees, assessments or other governmental charges or levies, either not yet delinquent or being contested in good faith by appropriate proceedings; provided, that Borrower maintains adequate reserves therefor in accordance with GAAP;

(gg) Liens securing claims or demands of materialmen, artisans, mechanics, carriers, warehousemen, landlords and other like Persons arising in the ordinary course of business and imposed without action of such parties; provided, that the payment thereof is not yet required;

(hh) Liens arising from judgments, decrees or attachments in circumstances which do not constitute an Event of Default hereunder;

(ii) the following deposits, to the extent made in the ordinary course of business: deposits under worker's compensation, unemployment insurance, social security and other similar laws, or to secure the performance of bids, tenders or contracts (other than for the repayment of borrowed money) or to secure indemnity, performance or other similar bonds for the performance of bids, tenders or contracts (other than for the repayment of borrowed money) or to secure statutory obligations (other than Liens arising under ERISA or environmental Liens) or surety or appeal bonds, or to secure indemnity, performance or other similar bonds;

(jj) Liens on Equipment or software or other intellectual property constituting purchase money Liens and Liens in connection with capital leases securing Indebtedness permitted in clause (c) of "Permitted Indebtedness";

(kk) Liens incurred in connection with Subordinated Indebtedness;

(ll) leasehold interests in leases or subleases and licenses granted in the ordinary course of business and not interfering in any material respect with the business of the licensor;

(mm) Liens in favor of customs and revenue authorities arising as a matter of law to secure payment of custom duties that are promptly paid on or before the date they become due;

(nn) Liens on insurance proceeds securing the payment of financed insurance premiums that are promptly paid on or before the date they become due (provided that such Liens extend only to such insurance proceeds and not to any other property or assets);

(oo) statutory and common law rights of set-off and other similar rights as to deposits of cash and securities in favor of banks, other depository institutions and brokerage firms or securities intermediaries to cover fees, similar expenses and charges;

(pp) easements, servitudes, zoning restrictions, rights-of-way and similar encumbrances on real property imposed by law or arising in the ordinary course of business so long as they do not materially impair the value or marketability of the related property;

(qq) licenses and other arrangements for the use of Intellectual Property permitted hereunder;

(rr) (i) Liens on Cash securing obligations permitted under clause (g)(ii) of the definition of Permitted Indebtedness and (ii) security deposits in connection with real property leases, the combination of (i) and (ii) in an aggregate amount not to exceed $[**] at any time;

(ss) Liens incurred in connection with the extension, renewal or refinancing of the Indebtedness secured by Liens of the type described in clause (b) above; provided, that any extension, renewal or replacement Lien shall be limited to the property encumbered by the existing Lien and the principal amount of the Indebtedness being extended, renewed or refinanced (as may have been reduced by any payment thereon) does not increase; and

(tt) Liens solely on the royalty interests purchased pursuant to a Permitted Royalty Transaction and proceeds thereon; provided that no Liens shall be granted with respect to any Intellectual Property of Borrower or its Subsidiaries.

"Permitted Royalty Transaction" means any synthetic royalty participations (and not royalty purchase or buyouts) whereby Borrower receives upfront unrestricted (including, not subject to any redemption, clawback, escrow or similar encumbrance or restriction) net cash proceeds of no less [**] in exchange for rights to participation payments or royalties based on net sales in an amount not to exceed [**] of net sales, on terms satisfactory to Agent.

"Permitted Transfers" means:

(a) sales of Inventory in the ordinary course of business;

(uu) licenses and similar arrangements for the use of Intellectual Property in the ordinary course of business and on an arm's length basis, that would not result in a legal transfer of title of the licensed property that may be either (x) exclusive as to specific geographic regions or territories outside of the United States of America or (y) exclusive globally with respect to (I) [**] or (II) one or more pathogens for the [**] programs or fields of Borrower;

(vv) licenses and similar arrangements for the use of Intellectual Property in the ordinary course of business and on an arm's length basis, including in connection with business development transactions, co-development, co-commercialization, or co-promotion transactions, profit-sharing transactions, collaborations, licensing, partnering or similar transactions with established pharmaceutical companies and that are entered into with commercially reasonable terms, for territories including the United States of America;

(ww) dispositions of worn-out, obsolete or surplus Equipment at fair market value in the ordinary course of business;

(xx) use of Cash in the ordinary course of business or as otherwise permitted herein;

(yy) sale of stock or other shares in the ordinary course of business;

(zz) transfers constituting the making of Permitted Investments, or the granting of Permitted Liens;

(aaa) any sale or series of related sales of assets related to the Borrower's [**] program, so long as such sale or related series of sales yields upfront net cash proceeds of at least $[**], either as upfront milestone payment or proceeds resulting from the sale of Borrower's equity as a part of the transaction,

which such net cash proceeds shall be held in accounts subject to an Account Control Agreement in favor of Agent; and

(bbb) other transfers of assets having a fair market value of not more than $[**] in the aggregate in any fiscal year.

"Permitted Warrant Transaction" means any call option, warrant or right to purchase (or substantively equivalent derivative transaction) relating to Borrower's common stock (or other securities or property following a merger event or other change of the common stock of Borrower) and/or cash (in an amount determined by reference to the price of such common stock) sold by Borrower substantially concurrently with any purchase by Borrower of a related Permitted Bond Hedge Transaction.

"Person" means any individual, sole proprietorship, partnership, joint venture, trust, unincorporated organization, association, corporation, limited liability company, institution, other entity or government.

"Prime Rate" means the rate of interest quoted in the print edition of The Wall Street Journal as the prime rate, as in effect from time to time.

"Public Health Laws" means all Requirements of Law relating to the procurement, development, clinical and non-clinical evaluation, product approval or licensure, manufacture, production, analysis, distribution, dispensing, importation, exportation, use, handling, quality, sale, labeling, promotion, clinical trial registration or post market requirements of any drug product (including, without limitation, any ingredient or component of the foregoing products) subject to regulation under the Federal Food, Drug, and Cosmetic Act (21 U.S.C. § 301 et seq.) and the Public Health Service Act (42 U.S.C. § 282(j)), including without limitation all applicable regulations promulgated by the FDA at Title 21 of the Code of Federal Regulations and all applicable regulations promulgated by the National Institutes of Health ("NIH") and codified at Title 42, Part 11 of the Code of Federal Regulations.

"Qualified Cash" means an amount equal to (a) the amount of Borrower's Cash held in accounts subject to an Account Control Agreement in favor of Agent, minus (b) the Qualified Cash A/P Amount.

"Qualified Cash A/P Amount" means the amount of Borrower's accounts payable under GAAP not paid after the 150th day following the invoice for such account payable, so long as such invoice is not in dispute in the ordinary course of business and subject to any reserves required under GAAP.

"Receivables" means (i) all of Borrower's Accounts, Instruments, Documents, Chattel Paper, Supporting Obligations, letters of credit, proceeds of any letter of credit, and Letter of Credit Rights, and (ii) all customer lists, software, and business records related thereto.

"Redemption Conditions" means, with respect to any redemption by Borrower of any Permitted Convertible Debt, satisfaction of each of the following events: (a) no default or Event of Default shall exist or result therefrom, and (b) both immediately before and at all times after such redemption, Borrower's Qualified Cash shall be no less than 150% of the outstanding principal amount of the Term Loan Advances.

"Registrations" shall mean authorizations, approvals, licenses, permits, certificates, registrations, listings, certificates, or exemptions of or issued by any governmental authority that are required for the research, development, manufacture, commercialization, distribution, marketing, storage, transportation, pricing, governmental authority reimbursement, use and sale of Borrower Products.

"Regulatory Action" means an administrative or regulatory enforcement action, proceeding or investigation, warning letter, untitled letter, Form 483 or similar inspectional observations, other written notice of violation letter, recall, seizure, "Section 305 notice" or other similar written communication, or consent decree, issued or required by the FDA or the NIH under the Public Health Laws or by a comparable governmental authority under similar Requirements of Law in any other regulatory jurisdiction.

"Required Lenders" means (a) for so long as all of the Persons that are Lenders on the Closing Date (each, an "Original Lender") have not assigned or transferred any of their interests in the Term Loan Advances or Term Commitments, Lenders holding one hundred percent (100%) of the aggregate unpaid principal amount of the Term Loan Advances and Term Commitments then outstanding and (b) at any time from and after any Original Lender has assigned or transferred any interest in its Term Loan Advances or Term Commitments, the Lenders holding more than 50% of the sum of the aggregate unpaid principal amount of the Term Loan Advances and the Term Commitments then outstanding and, in respect of this clause (b), (i) each Original Lender that has not assigned or transferred any portion of the Term Loan Advances or Term Commitments, and (ii) each assignee or transferee of an Original Lender's interest in the Term Loan Advances or the Term Commitments, but only to the extent that such assignee is an Affiliate or Approved Fund of such Original Lender.

"Requirements of Law" means, with respect to any Person, collectively, the common law and all federal, state, provincial, local, foreign, multinational or international laws, statutes, codes, treaties, standards, rules and regulations, ordinances, orders, judgments, writs, injunctions, decrees (including administrative or judicial precedents or authorities), in each case that are applicable to and binding upon such Person or any of its property or to which such Person or any of its property is subject.

"Sanctioned Country" means, at any time, a country or territory which is the subject or target of any Sanctions.

"Sanctioned Person" means, at any time, (a) any Person listed in any Sanctions-related list of designated Persons maintained by the Office of Foreign Assets Control of the U.S. Department of the Treasury or the U.S. Department of State, or by the United Nations Security Council, the European Union or any EU member state, (b) any Person operating, organized or resident in a Sanctioned Country or (c) any Person controlled by any such Person.

"Sanctions" means economic or financial sanctions or trade embargoes imposed, administered or enforced from time to time by (a) the U.S. government, including those administered by the Office of Foreign Assets Control of the U.S. Department of the Treasury or the U.S. Department of State, or (b) the United Nations Security Council, the European Union or Her Majesty's Treasury of the United Kingdom.

"SBA Funding Date" means the Closing Date (such date being the date on which a Lender which is an SBIC funds any portion of the Loan, which such date can only occur upon the confirmation by Borrower in its sole discretion that on such date it meets the requirements under Addendum 2).

"Second Interest Only Extension Conditions" shall mean satisfaction of each of the following events: (a) no default or Event of Default shall have occurred and be continuing; (b) the First Interest Only Extension Conditions have been satisfied, and (c) either of Performance Milestone III or Performance Milestone IV has been achieved on or prior to June 15, 2025.

"Secured Obligations" means each Borrower's obligations under this Agreement and any Loan Document, including, without limitation, (a) any obligation to pay any amount now owing or later arising and (b) all obligations relating to Bank Services, if any.

"Subordinated Indebtedness" means Indebtedness subordinated to the Secured Obligations in amounts and on terms and conditions satisfactory to Agent in its reasonable discretion and subject to a subordination agreement in form and substance satisfactory to Agent in its reasonable discretion.

"Subsequent Financing" means the closing of any Borrower financing which becomes effective after the Closing Date that is broadly marketed to multiple investors but excluding, for the avoidance of doubt, any Borrower financing under the Borrower's "at the market" or similar facilities.

"Subsidiary" means an entity, whether a corporation, partnership, limited liability company, joint venture or otherwise, in which Borrower owns or controls 50% or more of the outstanding voting securities, directly or indirectly. If not otherwise specified, a Subsidiary shall mean a direct or indirect Subsidiary of Borrower, including each entity listed on Schedule 5.14 hereto.

"Taxes" means all present or future taxes, levies, imposts, duties, deductions, withholdings (including backup withholding), assessments, fees or other charges imposed by any governmental authority, including any interest, additions to tax or penalties applicable thereto.

"Term Commitment" means as to any Lender, the obligation of such Lender, if any, to make a Term Loan Advance to Borrower in a principal amount not to exceed the amount set forth under the heading "Term Commitment" opposite such Lender's name on Schedule 1.1(a).

"Term Loan Advance" means an Advance pursuant to Section 2.1(a)

"Term Loan Cash Interest Rate" means, for any day, a per annum rate of interest equal to the greater of (i) (x) the Cash Prime Rate *plus* (y) 3.15%, and (ii) 7.15%.

"Term Loan PIK Interest Rate" means, for any day, a per annum rate of interest equal to 2.00%.

"Term Loan Maturity Date" means July 19, 2027; provided that if such day is not a Business Day, the Term Loan Maturity Date shall be the immediately preceding Business Day.

"Trademark License" means any written agreement granting any right to use any Trademark or Trademark registration, now owned or hereafter acquired by Borrower or in which Borrower now holds or hereafter acquires any interest.

"Trademarks" means all trademarks (registered, common law or otherwise) and any applications in connection therewith, including registrations, recordings and applications in the United States Patent and Trademark Office or in any similar office or agency of the United States of America, any State thereof or any other country or any political subdivision thereof.

"Tranche II" means the advances pursuant to Section 2.1(a)(ii).

"Tranche II Facility Charge" means 0.50% of the principal amount of any Advance pursuant to Tranche II, which is payable to Lenders in accordance with Section 4.2(d).

"Tranche III" means the advances pursuant to Section 2.1(a)(iii).

"Tranche III Facility Charge" means 0.50% of the principal amount of any Advance pursuant to Tranche III, which is payable to Lenders in accordance with Section 4.2(e).

"Tranche IV" means the advances pursuant to Section 2.1(a)(iv).

"Tranche IV Facility Charge" means 0.50% of the principal amount of any Advance pursuant to Tranche IV, which is payable to Lenders in accordance with Section 4.2(f).

"Tranche V" means the advances pursuant to Section 2.1(a)(v).

"Tranche V Facility Charge" means 0.50% of the principal amount of any Advance pursuant to Tranche V, which is payable to Lenders in accordance with Section 4.2(g).

"UCC" means the Uniform Commercial Code as the same is, from time to time, in effect in the State of California; provided, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection or priority of, or remedies with respect to, Agent's Lien on any Collateral is governed by the Uniform Commercial Code as the same is, from time to time, in effect in a jurisdiction other than the State of California, then the term "UCC" shall mean the Uniform Commercial Code as in effect, from time to time, in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority or remedies and for purposes of definitions related to such provisions.

"U.S. Person" means any Person that is a "United States person" as defined in Section 7701(a)(30) of the Code.

1.2 Certain Additional Defined Terms. The following terms are defined in the Sections or subsections referenced opposite such terms:

Defined Term	Section
“Agent”	Preamble
“Assignee”	11.14
“Borrower”	Preamble
“Claims”	11.11
“Collateral”	3.1
“Confidential Information”	11.13
“End of Term Charge”	2.5
“Event of Default”	9
“Financial Statements”	7.1
“Indemnified Person”	6.3
“Lenders”	Preamble
“Liabilities”	6.3
“Maximum Rate”	2.2
“Open Source License”	5.10(p)
“Participant Register”	11.8
“Prepayment Charge”	2.4
“Publicity Materials”	11.19
“Register”	11.7
“Rights to Payment”	3.1
“SBA”	7.16
“SBIC”	7.16
“SBIC Act”	7.16
“Specified Disputes”	5.10(g)
“Third Party IP”	5.10(i)

Unless otherwise specified, all references in this Agreement or any Annex or Schedule hereto to a “Section,” “subsection,” “Exhibit,” “Annex,” or “Schedule” shall refer to the corresponding Section, subsection, Exhibit, Annex, or Schedule in or to this Agreement. Unless otherwise specifically provided herein, any accounting term used in this Agreement or the other Loan Documents shall have the meaning customarily given such term in accordance with GAAP, and all financial computations hereunder shall be computed in accordance with GAAP, consistently applied. Unless otherwise defined herein or in the other Loan Documents, terms that are used herein or in the other Loan Documents and defined in the UCC shall have the meanings given to them in the UCC. For all purposes under the Loan Documents, in connection with any division or plan of division under Delaware law (or any comparable event under a different jurisdiction’s laws): (a) if any asset, right, obligation or liability of any Person becomes the asset, right, obligation or liability of a different Person, then it shall be deemed to have been transferred from the original Person to the subsequent Person and (b) if any new Person comes into existence, such new Person shall be deemed to have been organized on the first date of its existence by the holders of its Equity Interests at such time.

Notwithstanding anything to the contrary in this Agreement or any other Loan Document, all terms of an accounting or financial nature used herein shall be construed, and all computations of amounts and ratios referred to herein shall be made without giving effect to any treatment of Indebtedness in respect of convertible debt instruments under Accounting Standards Codification 470-20 (or any other Accounting Standards Codification or Financial Accounting Standard having a similar result or effect) to value any such Indebtedness in a reduced or bifurcated manner as described therein, and such Indebtedness shall at

all times be valued at the full stated principal amount thereof. For the avoidance of doubt, and without limitation of the foregoing, Permitted Convertible Debt shall at all times be valued at the full stated principal amount thereof and shall not include any reduction or appreciation in value of the shares deliverable upon conversion thereof.

SECTION 2
THE LOAN

2.1 Term Loan Advances.

(a) Term Commitment.

(i) *Tranche I*. Subject to the terms and conditions of this Agreement, (A) on the Closing Date, Lenders shall severally (and not jointly) make, and Borrower agrees to draw, a Term Loan Advance of $15,000,000 and (B) on or prior to March 15, 2023, Borrower may request, and the Lenders shall severally (and not jointly) make, one or more additional Term Loan Advances in minimum increments of $5,000,000 (or if less than $5,000,000 the remaining amount of Term Loan Advances available to be drawn pursuant to this Section 2.1(a)(i)) in an aggregate principal amount of up to $15,000,000.

(ii) *Tranche II*. Subject to the terms and conditions of this Agreement and satisfaction of Performance Milestone I, on or prior to December 15, 2023, Borrower may request, and Lenders shall severally (and not jointly) make, one or more additional Term Loan Advances in minimum increments of $5,000,000 (or if less than $5,000,000 the remaining amount of Term Loan Advances available to be drawn pursuant to this Section 2.1(a)(ii)) in an aggregate principal amount up to $10,000,000.

(iii) *Tranche III*. Subject to the terms and conditions of this Agreement and satisfaction of Performance Milestone II, on or prior to December 15, 2023, Borrower may request, and Lenders shall severally (and not jointly) make, one or more additional Term Loan Advances in minimum increments of $5,000,000 (or if less than $5,000,000 the remaining amount of Term Loan Advances available to be drawn pursuant to this Section 2.1(a)(iii)) in an aggregate principal amount up to $10,000,000.

(iv) *Tranche IV*. Subject to the terms and conditions of this Agreement and satisfaction of Performance Milestone III, on or prior to June 15, 2024, Borrower may request, and Lenders shall severally (and not jointly) make, one or more additional Term Loan Advances in minimum increments of $5,000,000 (or if less than $5,000,000 the remaining amount of Term Loan Advances available to be drawn pursuant to this Section 2.1(a)(iv)) in an aggregate principal amount up to $10,000,000.

(v) *Tranche V*. Subject to the terms and conditions of this Agreement and satisfaction of Performance Milestone IV, on or prior to June 15, 2024, Borrower may request, and Lenders shall severally (and not jointly) make, one or more additional Term Loan Advances in minimum increments of $5,000,000 (or if less than $5,000,000 the remaining amount of Term Loan Advances available to be drawn pursuant to this Section 2.1(a)(v)) in an aggregate principal amount up to $20,000,000.

The aggregate outstanding Term Loan Advances shall not exceed the Maximum Term Loan Amount plus, for the avoidance of doubt, any amount equal to the Term Loan PIK Interest added to principal pursuant to Section 2.1(c)(ii). Each Term Loan Advance of each Lender shall not exceed its respective Term Commitment plus, for the avoidance of doubt, any amount equal to the Term Loan PIK Interest added to principal pursuant to Section 2.1(c)(ii).

(b) Advance Request. To obtain a Term Loan Advance, Borrower shall complete, sign and deliver an Advance Request to Agent at least five (5) Business Days before the Advance Date, other than the Term Loan Advance to be made on the Closing Date, which shall be at least one (1) Business Day before the Advance Date. Lenders shall fund the Term Loan Advance in the manner requested by the Advance Request provided that each of the conditions precedent to such Term Loan Advance is satisfied as of the requested Advance Date.

(c) Interest.

(i) Term Loan Cash Interest Rate. In addition to interest accrued pursuant to the Term Loan PIK Interest Rate, the principal balance (including, for the avoidance of doubt, any payment-in-kind interest added to principal pursuant to Section 2.1(c)(ii)) of each Term Loan Advance shall bear interest thereon from such Advance Date at the Term Loan Cash Interest Rate based on a year consisting of 360 days, with interest computed daily based on the actual number of days elapsed. The Term Loan Cash Interest Rate will float and change on the day the Prime Rate changes from time to time.

(ii) Term Loan PIK Interest Rate. In addition to interest accrued pursuant to the Term Loan Cash Interest Rate, the principal balance of each Term Loan Advance shall bear interest thereon from such Advance Date at the Term Loan PIK Interest Rate based on a year consisting of 360 days, with interest computed daily based on the actual number of days elapsed, which amount shall be added to the outstanding principal balance so as to increase the outstanding principal balance of such Term Loan Advance on each payment date for such Advance, which principal amount shall accrue interest payable as provided in Section 2.1(c)(i) and which accrued and unpaid amount shall be payable when the principal amount of the Advance is payable in accordance with Section 2.1(d).

(d) Payment. Borrower shall pay interest on each Term Loan Advance on the first Business Day of each month, beginning the month after the Advance Date continuing until the Amortization Date. Borrower shall repay the aggregate principal balance of the Term Loan Advances that is outstanding on the day immediately preceding the Amortization Date, in equal monthly installments of principal and interest (mortgage style) beginning on the Amortization Date and continuing on the first Business Day of each month thereafter until the Secured Obligations (other than inchoate indemnity obligations and any obligations under Bank Services Agreements that are cash collateralized in accordance with Section 3.3 of this Agreement) are repaid, provided that if the Term Loan Cash Interest Rate is adjusted in accordance with its terms, or the Amortization Date is extended, the amount of each subsequent monthly installment shall be recalculated. The entire principal balance of the Term Loan Advances and all accrued but unpaid interest hereunder, shall be due and payable on the Term Loan Maturity Date. Except as otherwise provided in this Agreement, Borrower shall make all payments under this Agreement without setoff, recoupment or deduction and regardless of any counterclaim or defense. If a payment hereunder becomes due and payable on a day that is not a Business Day, the due date thereof shall be the immediately preceding Business Day. Lenders will initiate debit entries to Borrower's account as authorized on the ACH Authorization (i) on each payment date of all periodic obligations payable to Lenders under each Term Loan Advance and (ii) out-of-pocket legal fees and costs incurred by Agent or Lenders in connection with Section 11.12 of this Agreement; provided that, with respect to clause (i) above, in the event that Lenders or Agent informs Borrower that Lenders will not initiate a debit entry to Borrower's account for a certain amount of the periodic obligations due on a specific payment date, Borrower shall pay to Lenders such amount of periodic obligations in full in immediately available funds on such payment date; provided, further, that, with respect to clause (i) above, if Lenders or Agent informs Borrower that Lenders will not initiate a debit entry as described above later than the date that is three (3) Business Days prior to such payment date, Borrower shall pay to Lenders, such amount of periodic obligations in full in immediately available funds on the date that is three (3) Business Days after the date on which Lenders or Agent notifies Borrower thereof; provided,

further, that, with respect to clause (ii) above, in the event that Lenders or Agent informs Borrower that Lenders will not initiate a debit entry to Borrower's account for specified out-of-pocket legal fees and costs incurred by Agent or Lenders, Borrower shall pay to Lenders such amount in full in immediately available funds within three (3) Business Days.

2.2 Maximum Interest. Notwithstanding any provision in this Agreement or any other Loan Document, it is the parties' intent not to contract for, charge or receive interest at a rate that is greater than the maximum rate permissible by law that a court of competent jurisdiction shall deem applicable hereto (which under the laws of the State of California shall be deemed to be the laws relating to permissible rates of interest on commercial loans) (the "Maximum Rate"). If a court of competent jurisdiction shall finally determine that Borrower has actually paid to Lenders an amount of interest in excess of the amount that would have been payable if all of the Secured Obligations had at all times borne interest at the Maximum Rate, then such excess interest actually paid by Borrower shall be applied as follows: first, to the payment of the Secured Obligations consisting of the outstanding principal; second, after all principal is repaid, to the payment of Lenders' accrued interest, costs, expenses, professional fees and any other Secured Obligations; and third, after all Secured Obligations are repaid, the excess (if any) shall be refunded to Borrower.

2.3 Default Interest. In the event any payment is not paid on the scheduled payment date, other than due to a failure of any ACH debit due solely to an administrative or operational error of Agent or Lender or Borrower's bank if Borrower had the funds to make the payment when due and makes the payment within three (3) Business Days following Borrower's knowledge of such failure to pay, an amount equal to four percent (4%) of the past due amount shall be payable on demand. In addition, upon the occurrence and during the continuation of an Event of Default hereunder, all Secured Obligations, including principal, interest, compounded interest, and professional fees, shall bear interest at a rate per annum equal to the rate set forth in Section 2.1(c), plus four percent (4%) per annum. In the event any interest is not paid when due hereunder, delinquent interest shall be added to principal and shall bear interest on interest, compounded at the rate set forth in Section 2.1(c) or this Section 2.3, as applicable.

2.4 Prepayment. At its option, Borrower may at any time prepay all or a portion of the outstanding Advances by paying the entire principal balance (or such portion thereof), all accrued and unpaid interest thereon, all unpaid Lender's fees and expenses accrued to the date of the repayment (including, without limitation, the portion of the End of Term Charge applicable to the aggregate original principal amount of the Term Loan Advances being prepaid in accordance with Section 2.5(a)), together with a prepayment charge equal to the following percentage of the outstanding principal amount of such Advance amounts being so prepaid: with respect to each Advance (which Advance amount shall include, for the avoidance of doubt, any principal that has been added to the principal balance of such Advance pursuant to Section 2.1(c)(ii)) (a) if the principal amount of such Advance amounts are prepaid on or prior to the date which is twelve (12) months following the Closing Date, two and one-half percent (2.5%); (b) if the principal amount of such Advance amounts are prepaid after the date which is twelve (12) months following the Closing Date but on or prior to the date which is twenty-four (24) months following the Closing Date, one and one-half percent (1.50%); if the principal amount of such Advance amounts are prepaid after the date which is twenty-four (24) months following the Closing date but on or prior to the date which is thirty-six (36) months following the Closing Date, one percent (1.00%); and (c) after the date which is thirty-six (36) months following the Closing Date through the day prior to the Term Loan Maturity Date, zero percent (0%) of the principal amount of the Advance being prepaid for any prepayment of an Advance on or prior to the Amortization Date (a "Prepayment Charge"). Borrower agrees that the Prepayment Charge is a reasonable calculation of Lenders' lost profits in view of the difficulties and impracticality of determining actual damages resulting from an early repayment of the Advances. Borrower shall prepay the outstanding amount of all principal and accrued interest through the prepayment date and

the Prepayment Charge upon the occurrence of a Change in Control. Notwithstanding the foregoing, Lenders agree to waive the Prepayment Charge if such Lender or any Affiliate thereof which is controlled by such Lender (in their sole and absolute discretion) agree in writing to refinance the Advances prior to the Term Loan Maturity Date. Any amounts paid under this Section shall be applied by Agent to the then unpaid amount of any Secured Obligations (including principal and interest) pro rata to all scheduled amounts owed. For the avoidance of doubt, if a payment hereunder becomes due and payable on a day that is not a Business Day, the due date thereof shall be the immediately preceding Business Day.

2.5 End of Term Charge.

(a) On any date that Borrower partially prepays the outstanding Secured Obligations pursuant to Section 2.4, Borrower shall pay Lenders a charge of 5.75% of the aggregate original principal amount of such Term Loan Advances being prepaid.

(b) On the earliest to occur of (i) the Term Loan Maturity Date, (ii) the date that Borrower prepays the outstanding Secured Obligations (other than any inchoate indemnity obligations, any obligations under Bank Services Agreements that are cash collateralized in accordance with Section 3.3 of this Agreement and any other obligations which, by their terms, are to survive the termination of this Agreement) in full, or (iii) the date that the Secured Obligations become due and payable, Borrower shall pay Lenders a charge (x) of 5.75% of the aggregate original principal amount of the Term Loan Advances made hereunder, *minus* (y) the aggregate amount of payments made pursuant to Section 2.5(a) (the "End of Term Charge").

(c) Notwithstanding the required payment date of such End of Term Charge, the applicable pro rata portion of the End of Term Charge calculated pursuant to Section 2.5 shall be deemed earned by Lenders as of each date that an applicable Term Loan Advance is made. For the avoidance of doubt, if a payment hereunder becomes due and payable on a day that is not a Business Day, the due date thereof shall be the immediately preceding Business Day.

2.6 Pro Rata Treatment. Each payment (including prepayment) on account of any fee and any reduction of the Term Loan Advances shall be made pro rata according to the Term Commitments of the relevant Lenders. Except with respect to any payment received by SVB with respect to obligations of Borrower in connection with Bank Services and except as otherwise provided in this Agreement, all of the rights, interests and obligations of each Lender under this Agreement and related Loan Documents, including security interests in the Collateral under this Agreement, shall be shared by the Lenders in the ratio of (a) the aggregate outstanding principal amount of such Lender's Term Loan Advances to Borrower under this Agreement to (b) the aggregate outstanding principal amount of all Term Loan Advances to Borrower under this Agreement. Each Lender shall promptly remit to the other Lender such sums as may be necessary to ensure the ratable repayment of each Lender's portion of any Term Loan Advance. Notwithstanding the foregoing, a Lender receiving a scheduled payment shall not be responsible for determining whether the other Lender also received its scheduled payment on such date; provided, however, if it is later determined that a Lender received more than its ratable share of scheduled payments made on any date or dates, then such Lender shall remit to the other Lender such sums as may be necessary to ensure the ratable payment of such scheduled payments, as instructed by Agent. Any reference in this Agreement to an allocation between or sharing by the Lenders of any right, interest or obligation "ratably," "proportionally" or in similar terms shall refer to this ratio. The provisions hereof shall apply irrespective of the time or order of attachment or perfection of security interests, or the time or order of filing or recording of financing statements.

2.7 Taxes; Increased Costs. Borrower, Agent and Lenders each hereby agree to the terms and conditions set forth on Addendum 1 attached hereto.

2.8 Treatment of Prepayment Charge and End of Term Charge. Borrower agrees that any Prepayment Charge and any End of Term Charge payable prior to the Term Loan Maturity Date shall be presumed to be the liquidated damages sustained by each Lender as the result of the early termination, and Borrower agrees that it is reasonable under the circumstances currently existing and existing as of the Closing Date. The Prepayment Charge and the End of Term Charge shall also be payable in the event the Secured Obligations (and/or this Agreement) are satisfied or released by foreclosure (whether by power of judicial proceeding), deed in lieu of foreclosure, or by any other means. Each Loan Party expressly waives (to the fullest extent it may lawfully do so) the provisions of any present or future statute or law that prohibits or may prohibit the collection of the foregoing Prepayment Charge and End of Term Charge in connection with any such acceleration. Borrower agrees (to the fullest extent that each may lawfully do so): (a) each of the Prepayment Charge and the End of Term Charge is reasonable and is the product of an arm's length transaction between sophisticated business people, ably represented by counsel; (b) each of the Prepayment Charge and the End of Term Charge shall be payable notwithstanding the then prevailing market rates at the time payment is made; (c) there has been a course of conduct between Lenders and Borrower giving specific consideration in this transaction for such agreement to pay the Prepayment Charge and the End of Term Charge as a charge (and not interest) in the event of prepayment or acceleration; and (d) Borrower shall be estopped from claiming differently than as agreed to in this paragraph. Borrower expressly acknowledges that its agreement to pay each of the Prepayment Charge and the End of Term Charge to Lenders as herein described was on the Closing Date and continues to be a material inducement to Lenders to provide the Term Loan Advances.

SECTION 3
SECURITY INTEREST

3.1 Grant of Security Interest. As security for the prompt and complete payment when due (whether on the payment dates or otherwise) of all the Secured Obligations, Borrower grants to Agent a security interest in all of Borrower's right, title, and interest in, to and under all of Borrower's personal property and other assets including without limitation the following (except as set forth herein) whether now existing or hereafter acquired (collectively, the "Collateral"): (a) Receivables; (b) Equipment; (c) Fixtures; (d) General Intangibles (other than Intellectual Property), (e) Inventory; (f) Investment Property; (g) Deposit Accounts; (h) Cash; (i) Goods; and all other tangible and intangible personal property of Borrower whether now or hereafter owned or existing, leased, consigned by or to, or acquired by, Borrower and wherever located, and any of Borrower's property in the possession or under the control of Agent; and, to the extent not otherwise included, all Proceeds of each of the foregoing and all accessions to, substitutions and replacements for, and rents, profits and products of each of the foregoing; provided, however, that the Collateral shall include all Accounts and General Intangibles that consist of rights to payment and proceeds from the sale, licensing or disposition of all or any part, or rights, in, the Intellectual Property (the "Rights to Payment"). Notwithstanding the foregoing, if a judicial authority (including a U.S. Bankruptcy Court) holds that a security interest in the underlying Intellectual Property is necessary to have a security interest in the Rights to Payment, then the Collateral shall automatically, and effective as of the date of this Agreement, include the Intellectual Property to the extent necessary to permit perfection of Agent's security interest in the Rights to Payment.

3.2 Excluded Collateral. Notwithstanding the broad grant of the security interest set forth in Section 3.1, above, the Collateral shall not include (a) more than 65% of the presently existing and hereafter arising issued and outstanding Equity Interests owned by Borrower of any Foreign Subsidiary or Foreign Subsidiary Holding Company which Equity Interests entitle the holder thereof to vote for directors or any

other matter, (b) nonassignable licenses or contracts, including without limitation any licenses described in clause (b) of the defined term "Permitted Transfers," which by their terms require the consent of the licensor thereof or another party (but only to the extent such prohibition on transfer is enforceable under applicable law, including, without limitation, Sections 9406, 9407 and 9408 of the UCC), provided, further, that upon the termination of such prohibition or such consent being provided with respect to any license or contract, such license or contract shall automatically be included in the Collateral, (c) property for which the granting of a security interest therein is contrary to applicable law, provided that upon the cessation of any such restriction or prohibition, such property shall automatically be included in the Collateral; (d) any Excluded Accounts; (e) any cash collateral deposit subject to a Permitted Lien hereunder, if the grant of a security interest with respect to such property pursuant to this Agreement would be prohibited by the agreement creating such Permitted Lien or would otherwise constitute a default thereunder or create a right of termination a party thereto (other than Borrower), provided that upon the termination and release of such cash collateral, such property shall automatically be included in the Collateral; (f) any lease, license or other agreement and any property subject thereto on the Closing Date or on the date of the acquisition of such property (other than any property acquired by a Loan Party subject to any such contract or other agreement to the extent such contract or other agreement was incurred in contemplation of such acquisition) to the extent that a grant of a security interest therein to secure the Secured Obligations would violate or invalidate such lease, license, contract or agreement or create a right of termination in favor of any other party thereto (other than the Borrower, any other Loan Party or any Subsidiary) (but (A) only to the extent such prohibition is enforceable under applicable law and (B) other than to the extent that any such term would be rendered ineffective pursuant to Sections 9-406, 9-408 or 9-409 (or any other Section) of Article 9 of the UCC); (g) any assets as to which the Agent in its reasonable discretion shall determine that the costs and burdens of obtaining or perfecting a security interest therein substantially outweigh the benefit to the Lenders of the security afforded thereby (including, without limitation, vehicles or other assets subject to a certificate of title); and (h) any other assets as may be agreed by the Agent in writing in its sole discretion to be excluded from Collateral.

3.3 The security interest granted in Section 3.1 of this Agreement shall continue until the Secured Obligations (other than contingent indemnification or reimbursement obligations that are not yet due and payable) have been paid in full and Lender has no further commitment or obligation hereunder or under the other Loan Documents to make any further Advances, and shall thereupon terminate upon Borrower providing cash collateral acceptable to SVB in its reasonable discretion (and executing, delivering and filing, alone or with SVB, any financing statements, security agreements, collateral assignments, notices, control agreements or other documents to perfect SVB's security interest in such cash collateral) for Secured Obligations constituting Bank Services, if any, and Lender and Agent shall, at Borrower's expense, take all actions reasonably requested by Borrower to evidence such termination. In the event there are Bank Services that are Secured Obligations consisting of outstanding Letters of Credit, Borrower shall provide to SVB cash collateral (and execute, deliver and file, alone or with SVB, any financing statements, security agreements, collateral assignments, notices, control agreements or other documents to perfect SVB's security interest in such cash collateral) in an amount equal to at least one hundred three percent (103.0%) plus all interest, fees, and costs due or to become due in connection therewith (as estimated by SVB in its good faith business judgment), to secure all of the Secured Obligations relating to such Letters of Credit.

3.4 Borrower acknowledges that it previously has entered, and/or may in the future enter, into Bank Services Agreements with SVB. Regardless of the terms of any Bank Services Agreement, Borrower agrees that any amounts Borrower owes SVB thereunder shall be deemed to be Secured Obligations hereunder and that it is the intent of Borrower and SVB to have all such Secured Obligations secured by the first priority perfected security interest in the Collateral granted herein (subject only to Addendum 5 and Permitted Liens that are permitted pursuant to the terms of this Agreement to have superior priority to

Agent's Lien in this Agreement), and by any and all other security agreements, mortgages, or other collateral granted to Agent by Borrower as security for the Secured Obligations, now or in the future.

SECTION 4
CONDITIONS PRECEDENT TO LOAN

The obligations of Lenders to make the Loan hereunder are subject to the satisfaction by Borrower of the following conditions:

4.1 Initial Advance. On or prior to the Closing Date, Borrower shall have delivered to Agent the following:

(a) Subject to Section 4.4, duly executed copies of the Loan Documents, Account Control Agreements with respect to each Deposit Account (other than any Excluded Accounts) maintained by Borrower and any of its Subsidiaries (other than any Excluded Subsidiaries) and all other documents and instruments reasonably required by Agent to effectuate the transactions contemplated hereby or to create and perfect the Liens of Agent with respect to all Collateral, in all cases in form and substance reasonably acceptable to Agent;

(b) a legal opinion of Borrower's counsel in form and substance reasonably acceptable to Agent;

(c) a copy of resolutions of Borrower's Board evidencing approval of the Loan and other transactions evidenced by the Loan Documents, certified by an officer of Borrower;

(d) copies of the Charter of Borrower, certified by the Secretary of State of the applicable jurisdiction of organization and the other Organizational Documents, as amended through the Closing Date, of Borrower, certified by an officer of Borrower;

(e) certificates of good standing for Borrower from the applicable jurisdiction of organization and similar certificates from all other jurisdiction in which Borrower does business and where the failure to be qualified could have a Material Adverse Effect;

(f) payment of the Due Diligence Fee, Initial Facility Charge and reimbursement of Agent's and Lenders' current expenses reimbursable pursuant to this Agreement, which amounts may be deducted from the initial Advance;

(g) subject to Section 4.4, all certificates of insurance, endorsements, and copies of each insurance policy required pursuant to Section 6.2;

(h) subject to Section 4.4, duly executed landlord's consent(s) in favor of Agent for Borrower's headquarters location and each other leased location of Borrower at which Collateral with a value in excess of $250,000 is located;

(i) subject to Section 4.4, duly executed bailee's waiver(s) in favor of Agent for each location (other than Borrower's headquarters location) where Borrower maintains property with a third party and at which Collateral with a value in excess of $250,000 is located; and

(j) evidence reasonably acceptable to Agent that Borrower has established at least one operating Deposit Account with SVB; and

(k) such other documents as Agent may reasonably request.

4.2 All Advances. On each Advance Date:

(a) Agent shall have received (i) an Advance Request for the relevant Advance as required by Section 2.1(b), duly executed by Borrower's Chief Executive Officer, Chief Financial Officer or Chief Accounting Officer, and (ii) any other documents Agent may reasonably request in its good faith business discretion.

(b) The representations and warranties set forth in this Agreement shall be true and correct in all material respects on and as of the applicable Advance Date with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date.

(c) Borrower shall be in compliance with all the terms and provisions set forth herein and in each other Loan Document on its part to be observed or performed, and at the time of and immediately after such Advance no Event of Default shall have occurred and be continuing.

(d) With respect to any Advance pursuant to Tranche II, Borrower shall have paid the Tranche II Facility Charge.

(e) With respect to any Advance pursuant to Tranche III, Borrower shall have paid the Tranche III Facility Charge.

(f) With respect to any Advance pursuant to Tranche IV, Borrower shall have paid the Tranche IV Facility Charge.

(g) With respect to any Advance pursuant to Tranche V, Borrower shall have paid the Tranche V Facility Charge.

Each Advance Request shall be deemed to constitute a representation and warranty by Borrower on the relevant Advance Date as to the matters specified in subsections (b) and (c) of this Section 4.2 and as to the matters set forth in the Advance Request.

4.3 No Default. As of the Closing Date and each Advance Date, (i) no fact or condition exists that could (or could, with the passage of time, the giving of notice, or both) constitute an Event of Default and (ii) no event that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing.

4.4 Post-Closing Obligations.

(a) Upon the date that is thirty (30) days after the Closing Date (which date may be extended subject to Agent's sole discretion), Borrower shall deliver all endorsements with respect to, and copies of, each insurance policy required pursuant to Section 6.2;

(b) Upon the date that is sixty (60) days after the Closing Date (which date may be extended subject to Agent's sole discretion), Borrower shall use commercially reasonable efforts to deliver duly executed landlord's consent(s) in favor of Agent for Borrower's headquarters location and each other leased location of Borrower at which Collateral with a value in excess of $250,000 is located;

(c) Upon the date that is sixty (60) days after the Closing Date (which date may be extended subject to Agent's sole discretion), Borrower shall use commercially reasonable efforts to deliver duly executed bailee's waiver(s) in favor of Agent for each location (other than Borrower's headquarters location) where Borrower maintains property with a third party and at which Collateral with a value in excess of $250,000 is located; and

(d) Upon the date that is five (5) Business Days after the Closing Date (which date may be extended subject to Agent's sole discretion), Borrower shall deliver an Account Control Agreement in respect of the securities account or deposit account of Borrower set forth in the perfection certificate delivered by Borrower to Agent on the Closing Date and maintained at U.S. Bank National Association and JPMorgan Chase Bank, N.A., as applicable (other than such accounts which are Excluded Accounts), in form and substance reasonably satisfactory to Agent; provided, however, that the proceeds of the Term Loan Advances shall not be transferred to the aforementioned accounts prior to the delivery of the Account Control Agreements required pursuant to this Section 4.4(d).

SECTION 5
REPRESENTATIONS AND WARRANTIES

Borrower represents and warrants that:

5.1 Organizational Status. Borrower is duly organized, legally existing and in good standing under the laws of its jurisdiction of incorporation, and is duly qualified as a foreign corporation in all jurisdictions in which the nature of its business or location of its properties require such qualifications and where the failure to be qualified could reasonably be expected to have a Material Adverse Effect. Borrower's present name, former names (if any), locations, place of formation, tax identification number, organizational identification number and other information are correctly set forth in Exhibit B, as may be updated by Borrower in a written notice (including any Compliance Certificate) provided to Agent after the Closing Date in accordance with this Agreement.

5.2 Collateral. Borrower owns the Collateral and the Intellectual Property, free of all Liens, except for Permitted Liens. Borrower has the power and authority to grant to Agent a Lien in the Collateral as security for the Secured Obligations.

5.3 Consents. Borrower's execution, delivery and performance of this Agreement and all other Loan Documents to which it is a party, (i) have been duly authorized by all necessary action in accordance with Borrower's Organizational Documents and applicable law, (ii) will not result in the creation or imposition of any Lien upon the Collateral, other than Permitted Liens, (iii) do not violate (A) any provisions of Borrower's Organizational Documents, or (B) any law, regulation, order, injunction, judgment, decree or writ to which Borrower is subject in any material respect, and (iv) do not violate any material contract or agreement or require the consent or approval of any other Person which has not already been obtained. The individual or individuals executing the Loan Documents on behalf of Borrower are duly authorized to do so.

5.4 Material Adverse Effect. No Material Adverse Effect has occurred and is continuing, and Borrower is not aware of any event or circumstance that is likely to occur that is reasonably expected to result in a Material Adverse Effect.

5.5 Actions Before Governmental Authorities. There are no actions, suits or proceedings at law or in equity or by or before any governmental authority now pending or, to the knowledge of Borrower,

threatened against or affecting Borrower or its property, that is reasonably expected to result in a Material Adverse Effect.

5.6 Laws.

(a) Neither Borrower nor any of its Subsidiaries is in violation of any law, rule or regulation, or in default with respect to any judgment, writ, injunction or decree of any governmental authority, where such violation or default is reasonably expected to result in a Material Adverse Effect. Borrower is not in default under (i) any provision of any agreement or instrument evidencing material Indebtedness in any material respect, or (ii) any other agreement to which it is a party or by which it is bound that is reasonably expected to result in a Material Adverse Effect.

(b) Neither Borrower nor any of its Subsidiaries is an "investment company" or a company "controlled" by an "investment company" under the Investment Company Act of 1940, as amended. Neither Borrower nor any of its Subsidiaries is engaged as one of its important activities in extending credit for margin stock (under Regulations X, T and U of the Federal Reserve Board of Governors). Borrower and each of its Subsidiaries has complied in all material respects with the Federal Fair Labor Standards Act. Neither Borrower nor any of its Subsidiaries is a "holding company" or an "affiliate" of a "holding company" or a "subsidiary company" of a "holding company" as each term is defined and used in the Public Utility Holding Company Act of 2005. Neither Borrower's nor any of its Subsidiaries' properties or assets have been used by Borrower or such Subsidiary or, to Borrower's knowledge, by previous Persons, in disposing, producing, storing, treating, or transporting any hazardous substance other than in material compliance with applicable laws. Borrower and each of its Subsidiaries has obtained all consents, approvals and authorizations of, made all declarations or filings with, and given all notices to, all governmental authorities that are necessary to continue their respective businesses as currently conducted.

(c) None of Borrower, any of its Subsidiaries, or, to the knowledge of Borrower, any of Borrower's or its Subsidiaries' Affiliates or any of their respective agents acting or benefiting in any capacity in connection with the transactions contemplated by this Agreement is (i) in violation of any Anti-Terrorism Law, (ii) engaging in or conspiring to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding or attempts to violate, any of the prohibitions set forth in any Anti-Terrorism Law, or (iii) is a Blocked Person. None of Borrower, any of its Subsidiaries, or to the knowledge of Borrower, any of their Affiliates or agents, acting or benefiting in any capacity in connection with the transactions contemplated by this Agreement, (x) conducts any business or engages in making or receiving any contribution of funds, goods or services to or for the benefit of any Blocked Person, or (y) deals in, or otherwise engages in any transaction relating to, any property or interest in property blocked pursuant to Executive Order No. 13224, any similar executive order or other Anti-Terrorism Law. None of the funds to be provided under this Agreement shall be used, directly or indirectly, (a) for any activities in violation of any applicable anti-money laundering, economic sanctions and anti-bribery laws and regulations laws and regulations or (b) for any payment to any governmental official or employee, political party, official of a political party, candidate for political office, or anyone else acting in an official capacity, in order to obtain, retain or direct business or obtain any improper advantage, in violation of the United States Foreign Corrupt Practices Act of 1977, as amended.

5.7 Information Correct and Current. No information, report, Advance Request, financial statement, exhibit or schedule furnished, by or on behalf of Borrower to Agent in connection with any Loan Document or included therein or delivered pursuant thereto contained, or, when taken as a whole, contains, or shall contain, any material misstatement of fact or, when taken together with all other such information or documents, omitted, omits or shall omit to state any material fact necessary to make the statements

therein, in the light of the circumstances under which they were, are or shall be made, not materially misleading at the time such statement was made or deemed made. Additionally, any and all financial or business projections provided by Borrower to Agent, whether prior to or after the Closing Date, shall be (i) provided in good faith and based on the most current data and information available to Borrower, and (ii) the most current of such projections provided to Borrower's Board (it being understood that the projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not viewed as facts, that such projections are subject to significant uncertainties and contingencies, many of which are beyond the control of Borrower, that no assurance is given that any particular projections will be realized, and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results).

5.8 Tax Matters. Except as set forth on Schedule 5.8, (a) Borrower and its Subsidiaries have filed all federal and state income Tax returns and other material Tax returns that they are required to file, (b) Borrower and its Subsidiaries have duly paid all federal and state income Taxes and other material Taxes or installments thereof that they are required to pay, except Taxes being contested in good faith by appropriate proceedings and for which Borrower and its Subsidiaries maintain adequate reserves in accordance with GAAP, and (c) to the best of Borrower's knowledge, no proposed or pending Tax assessments, deficiencies, audits or other proceedings with respect to Borrower or any Subsidiary have had, or could reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

5.9 Intellectual Property Claims. Borrower is the sole owner of, or otherwise has the right to use, the Intellectual Property material to Borrower's business. Except as described on Schedule 5.9 and as may be updated by Borrower in a written notice provided from time to time after the Closing Date, (i) each of the material Copyrights, Trademarks and Patents (other than patent applications) is valid and enforceable, (ii) no material part of the Intellectual Property has been judged invalid or unenforceable, in whole or in part, and (iii) except as set forth in the most recently delivered Compliance Certificate in accordance with Section 7.1(d), no claim has been made to Borrower in writing that any material part of the Intellectual Property violates the rights of any third party. Exhibit C (and as may be updated by Borrower in a written notice provided from time to time after the Closing Date) is a true, correct and complete list of each of Borrower's registered Patents and filed Patent applications, registered Trademarks, registered Copyrights, and Material Agreements under which Borrower licenses Intellectual Property from third parties (other than shrink-wrap software licenses, licenses that are commercially available to the public, open source licenses, licenses disclosed in writing to Agent as required under this Agreement and immaterial Intellectual Property licensed to Borrower in the ordinary course of business), together with application or registration numbers, as applicable, owned by Borrower or any Subsidiary, in each case as of the Closing Date. Borrower is not in material breach of, nor has Borrower failed to perform any material obligations under, any of the foregoing contracts, licenses or agreements and, to Borrower's knowledge, no third party to any such contract, license or agreement is in material breach thereof or has failed to perform any material obligations thereunder.

5.10 Intellectual Property.

(a) A true, correct and complete list of Current Company IP, including its name/title, current owner or co-owners (including ownership interest), registration, patent or application number, and registration or application date, issued or filed in the United States, is set forth on Schedule 5.10(a). Except as set forth on Schedule 5.10(a), (i) (A) each item of owned Current Company IP is valid, subsisting and (other than with respect to Patent applications) enforceable and no such item of Current Company IP has lapsed, expired, been cancelled or invalidated or become abandoned or unenforceable, and (B) no written notice has been received challenging the inventorship or ownership, or relating to any lapse, expiration, invalidation, abandonment or unenforceability, of any such item of Current Company IP, and (ii) (A) each

such item of Current Company IP which is licensed from another Person is valid, subsisting and enforceable and no such item of Current Company IP has lapsed, expired, been cancelled or invalidated, or become abandoned or unenforceable, and (B) no written notice has been received challenging the inventorship or ownership, or relating to any lapse, expiration, invalidation, abandonment or unenforceability, of any such item of Current Company IP. To the knowledge of Borrower, there are no published patents, patent applications, articles or prior art references that would reasonably be expected to be infringed by the exploitation of the Borrower Products. Except as set forth on Schedule 5.10(a), (x) each Person who has or has had any rights in or to owned Current Company IP or any trade secrets owned by the Borrower or any of its Subsidiaries, including each inventor named on the Patents within such owned Current Company IP filed by the Borrower or any of its Subsidiaries, has executed an agreement assigning his, her or its entire right, title and interest in and to such owned Current Company IP and such trade secrets, and the inventions, improvements, ideas, discoveries, writings, works of authorship, information and other intellectual property embodied, described or claimed therein, to the stated owner thereof, and (y) no such Person has any contractual or other obligation that would preclude or conflict with such assignment or the exploitation of the Borrower Products or entitle such Person to ongoing payments.

(b) [reserved].

(c) There are no maintenance, annuity or renewal fees that are currently overdue beyond their allotted grace period for any of the Current Company IP, nor have any applications or registrations therefor lapsed or become abandoned, been cancelled or expired.

(d) There are no unpaid fees or royalties under any Material Agreements that have become due, or are expected to become overdue. Each Material Agreement is in full force and effect and is legal, valid, binding, and enforceable in accordance with its respective terms, except as may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws relating to or limiting creditors' rights generally or by equitable principles relating to enforceability. Except as set forth on Schedule 5.10(d), neither Borrower nor any of its Subsidiaries, as applicable, is in breach of or default in any manner that could reasonably be expected to materially affect the Borrower Products under any Material Agreement to which it is a party or may otherwise be bound, and no circumstances or grounds exist that would give rise to a claim of breach or right of rescission, termination, non-renewal, revision or amendment of any of the Material Agreements, including the execution, delivery and performance of this Agreement and the other Loan Documents.

(e) No payments by the Borrower or any of its Subsidiaries are due to any other Person in respect of the Current Company IP, other than pursuant to the Material Agreements and those fees payable to patent offices in connection with the prosecution and maintenance of the Current Company IP, any applicable taxes and associated attorney fees.

(f) Neither the Borrower nor any of its Subsidiaries has undertaken or omitted to undertake any acts, and no circumstance or grounds exist that would invalidate or reduce, in whole or in part, the enforceability or scope of (i) the Current Company IP in any manner that could reasonably be expected to materially adversely affect the Borrower Products, or (ii) except as set forth on Schedule 5.10(f), the Borrower's or Subsidiary's entitlement to own or license and exploit such Current Company IP.

(g) Except as described on Schedule 5.9 or in the most recently delivered Compliance Certificate in accordance with Section 7.1(d), there is no requested, filed pending, decided or settled opposition, interference proceeding, reissue proceeding, reexamination proceeding, inter-partes review proceeding, post-grant review proceeding, cancellation proceeding, injunction, litigation, paragraph IV patent certification or lawsuit under the Hatch-Waxman Act, hearing, investigation, complaint, arbitration,

mediation, demand, International Trade Commission investigation, decree, or any other dispute, disagreement, or claim, in each case alleged in writing to Borrower or any of its Subsidiaries (collectively referred to hereinafter as "Specified Disputes"), nor to the knowledge of Borrower, has any such Specified Dispute been threatened in writing, in each case challenging the legality, validity, enforceability or ownership of any Current Company IP, in each case that would have a material adverse effect on the Borrower Products.

(h) In each case where an issued U.S. Patent within the Current Company IP is owned or co-owned by the Borrower or any of its Subsidiaries by assignment, the assignment has been duly recorded with the U.S. Patent and Trademark Office.

(i) Except as set forth on Schedule 5.10(i) there are no pending or, to the knowledge of Borrower, threatened claims in writing against Borrower or any of its Subsidiaries alleging that any research, development, manufacture, production, use, commercialization, marketing, importing, storage, transport, offer for sale, distribution or sale of the Borrower Products in the United States infringes or violates (or in the past infringed or violated) the rights of any third parties in or to any Intellectual Property ("Third Party IP") or constitutes a misappropriation of (or in the past constituted a misappropriation of) any Third Party IP.

(j) [reserved].

(k) Except as set forth on Schedule 5.10(k), to the knowledge of the Borrower, there are no settlements, covenants not to sue, consents, judgments, orders or similar obligations which: (i) restrict the rights of the Borrower or any of its Subsidiaries to use any Intellectual Property relating to the research, development, manufacture, production, use, commercialization, marketing, importing, storage, transport, offer for sale, distribution or sale of the Borrower Products (in order to accommodate any Third Party IP or otherwise), or (ii) permit any third parties to use any Current Company IP.

(l) Except as set forth on Schedule 5.10(l), to the knowledge of Borrower (i) there is no, nor has there been any, infringement or violation by any Person of any of the Current Company IP or the rights therein, and (ii) there is no, nor has there been any, misappropriation by any Person of any of the Current Company IP or the subject matter thereof.

(m) The Borrower and each of its Subsidiaries has taken all commercially reasonable measures customary in the biopharmaceutical industry to protect the confidentiality and value of all trade secrets owned by the Borrower or any of its Subsidiaries or used or held for use by the Borrower or any of its Subsidiaries, in each case relating to the research, development, manufacture, production, use, commercialization, marketing, importing, storage, transport, offer for sale, distribution or sale of the Borrower Products.

(n) [reserved].

(o) Except as described on Schedule 5.10(o), Borrower has all material rights with respect to Intellectual Property necessary or material in the operation or conduct of Borrower's business as currently conducted and proposed to be conducted by Borrower. Without limiting the generality of the foregoing, and in the case of Licenses, except for restrictions that are unenforceable under Division 9 of the UCC or restrictions that are permitted hereunder, Borrower has the right, to the extent required to operate Borrower's business, to freely transfer, license or assign Intellectual Property owned by Borrower and necessary or material in the operation or conduct of Borrower's business as currently conducted and proposed to be conducted by Borrower, without condition, restriction or payment of any kind (other than

license payments in the ordinary course of business) to any third party, and Borrower owns or has the right to use, pursuant to valid licenses, all software development tools, library functions, compilers and all other third-party software and other items that are material to Borrower's business and used in the design, development, promotion, sale, license, manufacture, import, export, use or distribution of Borrower Products that are material to Borrower's business except customary covenants in license agreements, joint venture or strategic alliances (to the extent such joint ventures or strategic alliances are Permitted Investments) and equipment leases where Borrower is the licensee or lessee.

(p) No material software or other material materials used by Borrower or any of its Subsidiaries (or used in any Borrower Products or any Subsidiaries' products) are subject to an open-source or similar license (including but not limited to the General Public License, Lesser General Public License, Mozilla Public License, or Affero License) (collectively, "Open Source Licenses") in a manner that would cause such software or other materials to have to be (i) distributed to third parties at no charge or a minimal charge (royalty-free basis); (ii) licensed to third parties to modify, make derivative works based on, decompile, disassemble, or reverse engineer; or (iii) used in a manner that does could require disclosure or distribution in source code form.

5.11 Borrower Products. Except as set forth on Schedule 5.11, no material Intellectual Property owned by Borrower or Borrower Product has been or is subject to any actual or, to the knowledge of Borrower, threatened in writing litigation, proceeding (including any proceeding in the United States Patent and Trademark Office or any corresponding foreign office or agency) or outstanding decree, order, judgment, settlement agreement or stipulation that restricts in any manner Borrower's use, transfer or licensing thereof or that may affect the validity, use or enforceability thereof. There is no decree, order, judgment, agreement, stipulation, arbitral award or other provision entered into in connection with any litigation or proceeding that obligates Borrower to grant licenses or ownership interest in any future Intellectual Property related to the operation or conduct of the business of Borrower or Borrower Products. Borrower has not received any written notice or claim, or, to the knowledge of Borrower, oral notice or claim, challenging or questioning Borrower's ownership in any material Intellectual Property (or written notice of any claim challenging or questioning the ownership in any licensed Intellectual Property of the owner thereof). To Borrower's knowledge, neither Borrower's use of its material Intellectual Property nor the production and sale of Borrower Products materially infringes the Intellectual Property or other rights of others, except as described on Schedule 5.9.

5.12 Financial Accounts. Exhibit D, as may be updated by Borrower in a written notice provided to Agent after the Closing Date, is a true, correct and complete list of (a) all banks and other financial institutions at which Borrower or any Subsidiary maintains Deposit Accounts and (b) all institutions at which Borrower or any Subsidiary maintains an account holding Investment Property, and such exhibit correctly identifies the name, address and telephone number of each bank or other institution, the name in which the account is held, a description of the purpose of the account, and the complete account number therefor.

5.13 Employee Loans. Other than loans constituting Permitted Investments, Borrower has no outstanding loans to any employee, officer or director of Borrower nor has Borrower guaranteed the payment of any loan made to an employee, officer or director of Borrower by a third party.

5.14 Subsidiaries. Borrower does not own any stock, partnership interest or other securities of any Person, except for Permitted Investments. Attached as Schedule 5.14, as may be updated by Borrower in a written notice provided after the Closing Date, is a true, correct and complete list of each Subsidiary.

SECTION 6
INSURANCE; INDEMNIFICATION

6.1 Coverage. Borrower shall cause to be carried and maintained commercial general liability insurance covering Borrower and each of its Subsidiaries, on an occurrence form, against risks customarily insured against in Borrower's line of business. Such risks shall include the risks of bodily injury, including death, property damage, personal injury, advertising injury, and contractual liability per the terms of the indemnification agreement found in Section 6.3. Borrower shall maintain a minimum of $2,000,000 of commercial general liability insurance for each occurrence. Borrower maintains and shall continue to maintain a minimum of $2,000,000 of directors' and officers' insurance for each occurrence and $5,000,000 in the aggregate. So long as there are any Secured Obligations outstanding, Borrower shall maintain insurance upon the business and assets of Borrower and its Subsidiaries, insuring against broad form property of physical loss or damage, in an amount not less than the full replacement cost of the Collateral, provided that such insurance may be subject to standard exceptions and deductibles. If Borrower fails to obtain the insurance called for by this Section 6.1 or fails to pay any premium thereon or fails to pay any other amount which Borrower is obligated to pay under this Agreement or any other Loan Document or which may be required to preserve the Collateral, Agent may obtain such insurance or make such payment, and all amounts so paid by Agent are immediately due and payable, bearing interest at the then highest rate applicable to the Secured Obligations, and secured by the Collateral. Agent will make reasonable efforts to provide Borrower with notice of Agent obtaining such insurance at the time it is obtained or within a reasonable time thereafter. No payments by Agent are deemed an agreement to make similar payments in the future or Agent's waiver of any Event of Default.

6.2 Certificates. Borrower shall deliver to Agent certificates of insurance that evidence compliance with its insurance obligations in Section 6.1 and the obligations contained in this Section 6.2. Borrower's insurance certificate shall reflect Agent (shown as "Hercules Capital, Inc., as Agent, and its successors and/or assigns") as an additional insured for commercial general liability, and a lenders loss payable for property insurance and additional insured for liability insurance for any future insurance that Borrower may acquire from such insurer. Attached to the certificates of insurance will be additional insured endorsements for liability and lender's loss payable endorsements for all risk property damage insurance. All certificates of insurance shall provide for a minimum of thirty (30) days' advance written notice to Agent of cancellation (other than cancellation for non-payment of premiums, for which ten (10) days' advance written notice shall be sufficient) or any other change adverse to Agent's interests. Any failure of Agent to scrutinize such insurance certificates for compliance is not a waiver of any of Agent's rights, all of which are reserved. Upon Agent's reasonable request, Borrower shall provide Agent with copies of each insurance policy, and upon entering or amending any insurance policy required hereunder, Borrower shall provide Agent with copies of such policies and shall promptly deliver to Agent updated insurance certificates with respect to such policies.

6.3 Indemnity. Borrower agrees to indemnify and hold Agent, Lenders and their officers, directors, employees, agents, in-house attorneys, representatives and shareholders (each, an "Indemnified Person") harmless from and against any and all claims, costs, reasonable and documented expenses, damages and liabilities (including such claims, costs, expenses, damages and liabilities based on liability in tort, including strict liability in tort), including reasonable and documented attorneys' fees and disbursements and other costs of investigation or defense (including those incurred upon any appeal) (collectively, "Liabilities"), that may be instituted or asserted against or incurred by such Indemnified Person as the result of credit having been extended, suspended or terminated under this Agreement and the other Loan Documents or the administration of such credit, or in connection with or arising out of the transactions contemplated hereunder and thereunder, or any actions or failures to act in connection therewith, or arising out of the disposition or utilization of the Collateral, excluding in all cases Liabilities

to the extent resulting solely from any Indemnified Person's gross negligence or willful misconduct. This Section 6.3 shall not apply with respect to Taxes other than any Taxes that represent losses, claims, damages, etc. arising from any non-Tax claim. In no event shall any Indemnified Person be liable on any theory of liability for any special, indirect, consequential or punitive damages (including any loss of profits, business or anticipated savings). This Section 6.3 shall survive the repayment of indebtedness under, and otherwise shall survive the expiration or other termination of, the Loan Agreement, in each case subject to the applicable statute of limitations.

SECTION 7
COVENANTS

Borrower agrees as follows:

7.1 Financial Reports. Borrower shall furnish to Agent the financial statements and reports listed hereinafter (the "Financial Statements"):

(a) as soon as practicable (and in any event within 30 days) after the end of each month, unaudited monthly financial statements as of the end of such month (prepared on a consolidated basis), including balance sheet and related statements of income and cash flows, provided, that such unaudited monthly financial statements are not required to have been prepared in accordance with GAAP;

(b) as soon as practicable (and in any event within 45 days) after the end of each calendar quarter, unaudited interim and year-to-date financial statements as of the end of such calendar quarter (prepared on a consolidated basis), including balance sheet and related statements of income and cash flows accompanied by a report detailing any material contingencies (including the commencement of any material litigation by or against Borrower) or any other occurrence that could reasonably be expected to have a Material Adverse Effect, certified by Borrower's Chief Executive Officer, Chief Financial Officer, Chief Accounting Officer or another authorized executive of Borrower to the effect that they have been prepared in accordance with GAAP, (i) except for the absence of footnotes, and (ii) subject to normal year-end adjustments;

(c) as soon as practicable (and in any event within 90 days or as otherwise permitted by the SEC) after the end of each fiscal year, unqualified (other than a going concern qualification) audited financial statements as of the end of such year (prepared on a consolidated and consolidating basis, if applicable), including balance sheet and related statements of income and cash flows, and setting forth in comparative form the corresponding figures for the preceding fiscal year, certified by a firm of independent certified public accountants selected by Borrower and reasonably acceptable to Agent, accompanied by any management report from such accountants; it being agreed that Ernst & Young is reasonably acceptable to the Agent;

(d) as soon as practicable (and in any event within thirty (30) days) after the end of each month, a Compliance Certificate in the form of Exhibit E;

(e) as soon as practicable (and in any event within thirty (30) days) after the end of each month, a report showing agings of accounts receivable and accounts payable;

(f) [reserved];

(g) financial and business projections promptly following their approval by Borrower's Board, and in any event, sixty (60) days after the end of Borrower's fiscal year, as well as budgets, operating plans and other financial information reasonably requested by Agent;

(h) insurance renewal statements, annually or otherwise promptly upon renewal of insurance policies required to be maintained in accordance with Section 6.1, and

(i) prompt (but in any event no more than 3 Business Days) notice if Borrower or any Subsidiary has knowledge that Borrower, or any Subsidiary or controlled Affiliate of Borrower, is listed on the OFAC Lists or (a) is convicted on, (b) pleads *nolo contendere* to, (c) is indicted on, or (d) is arraigned and held over on charges involving money laundering or predicate crimes to money laundering.

Borrower shall not make any change in its (a) accounting policies or reporting practices (other than as permitted under GAAP or pursuant to applicable securities laws or regulations of the Securities and Exchange Commission), or (b) fiscal years or fiscal quarters. The fiscal year of Borrower shall end on December 31.

The executed Compliance Certificate, all Financial Statements required to be delivered pursuant to clauses (a), (b) and (c) above shall be sent via e-mail to [**] with a copy to [**], provided, that if e-mail is not available or sending such Financial Statements via e-mail is not possible, they shall be faxed to Agent at: (650) 473-9194, attention Account Manager: Gritstone bio, Inc.

Notwithstanding the foregoing, documents required to be delivered hereunder (to the extent any such documents are included in materials otherwise filed with the SEC) may be delivered electronically and if so delivered, shall be deemed to have been delivered on the date on which Borrower makes such documents or materials publicly available.

7.2 Management Rights. Borrower shall permit any representative that Agent or Lenders authorizes, including its attorneys and accountants, upon prior written notice of at least five (5) Business Days, to inspect the Collateral and examine and make copies and abstracts of the books of account and records of Borrower at reasonable times and upon reasonable notice during normal business hours; provided, however, that so long as no Event of Default has occurred and is continuing, such examinations shall be limited to no more often than once per fiscal year. In addition, any such representative shall have the right to meet with management and officers of Borrower to discuss such books of account and records at reasonable times and upon prior written notice of at least five (5) Business Days. In addition, Agent or Lenders shall be entitled at reasonable times and intervals to consult with and advise the management and officers of Borrower concerning significant business issues affecting Borrower. Such consultations shall not unreasonably interfere with Borrower's business operations. The parties intend that the rights granted Agent and Lenders shall constitute "management rights" within the meaning of 29 C.F.R. Section 2510.3-101(d)(3)(ii), but that any advice, recommendations or participation by Agent or Lenders with respect to any business issues shall not be deemed to give Agent or any Lender, nor be deemed an exercise by Agent or any Lender of, control over Borrower's management or policies.

7.3 Further Assurances. Borrower shall, and shall cause each other Loan Party to, from time to time execute, deliver and file, alone or with Agent, any financing statements, security agreements, collateral assignments, notices, control agreements, promissory notes or other documents to perfect or give the highest priority to Agent's Lien on the Collateral or otherwise evidence Agent's rights herein, in each case as reasonably requested by Agent. Borrower shall, from time to time procure any instruments or documents as may be reasonably requested by Agent, and take all further action that may be necessary, or that Agent may reasonably request, to perfect and protect the Liens granted hereby or pursuant to applicable

Loan Documents. In addition, and for such purposes only, Borrower hereby authorizes Agent to execute and deliver on behalf of Borrower and to file such financing statements (including an indication that the financing statement covers "all assets or all personal property" of Borrower in accordance with Section 9-504 of the UCC), without the signature of Borrower, either in Agent's name or in the name of Agent as agent and attorney-in-fact for Borrower. Borrower shall in good faith and in its reasonable commercial discretion, in each case subject to the terms of this Agreement, protect and defend its title to the Collateral and Agent's Lien thereon against all Persons claiming any interest adverse to Borrower or Agent other than Permitted Liens.

7.4 Indebtedness. Borrower shall not create, incur, assume, guarantee or be or remain liable with respect to any Indebtedness, and shall not permit any Subsidiary to do so, other than Permitted Indebtedness, or prepay any Indebtedness or take any actions which impose on Borrower an obligation to prepay any Indebtedness, except (a) for the conversion of Indebtedness into equity securities and the payment of cash in lieu of fractional shares in connection with such conversion, (b) for purchase money Indebtedness pursuant to its then applicable payment schedule or with other purchase money Indebtedness permitted hereunder, (c) for prepayment (i) by any Loan Party or Subsidiary of intercompany Indebtedness owed to Borrower, or (ii) by any Subsidiary that is not a Loan Party of intercompany Indebtedness owed by such Subsidiary to another Subsidiary that is not a Loan Party, or (d) as may be permitted under any Subordination Agreement, (e) as otherwise permitted hereunder or approved in writing by Agent, (f) Permitted Indebtedness with the proceeds of other Permitted Indebtedness and (g) Indebtedness owed under corporate credit cards constituting "Permitted Indebtedness" and prepaid in the ordinary course of business.

Notwithstanding anything to the contrary in the foregoing, the issuance of, performance of obligations under (including any payments of interest), and conversion, exercise, repurchase, redemption (including, for the avoidance of doubt, a required repurchase in connection with the redemption of Permitted Convertible Debt upon satisfaction of a condition related to the stock price of Borrower's common stock), settlement or early termination or cancellation of (whether in whole or in part and including by netting or set-off) (in each case, whether in cash, common stock of Borrower or, following a merger event or other change of the common stock of Borrower, other securities or property), or the satisfaction of any condition that would permit or require any of the foregoing, any Permitted Convertible Debt shall not constitute a prepayment of Indebtedness by Borrower for the purposes of this Section 7.4 provided that principal payments in cash (other than cash in lieu of fractional shares) shall only be allowed with respect to any repurchase in connection with the redemption of Permitted Convertible Debt upon satisfaction of a condition related to the stock price of Borrower's common stock if the Redemption Conditions are satisfied in respect of such redemption and at all times after such redemption.

7.5 Collateral. Borrower shall at all times keep the Collateral, the Intellectual Property and all other property and assets used in Borrower's business or in which Borrower now or hereafter holds any interest free and clear from Liens whatsoever (except for Permitted Liens), and shall give Agent prompt written notice of any legal process that is reasonably likely to result in damages, expenses or liabilities in excess of $1,000,000 affecting the Collateral, the Intellectual Property, such other property or assets, or any Liens thereon, provided, however, that the Collateral and such other property and assets may be subject to Permitted Liens except that there shall be no Liens whatsoever on Intellectual Property. Borrower shall not agree with any Person other than Agent or Lenders not to encumber its property other than in connection with Permitted Liens. Borrower shall not enter into or suffer to exist or become effective any agreement that prohibits or limits the ability of Borrower to create, incur, assume or suffer to exist any Lien upon any of its property (including Intellectual Property), whether now owned or hereafter acquired, to secure its obligations under the Loan Documents to which it is a party other than (a) this Agreement and the other Loan Documents, (b) any agreements governing any purchase money Liens or capital lease obligations otherwise permitted hereby (in which case, any prohibition or limitation shall only be effective against the

assets financed thereby) and (c) customary restrictions on the assignment of leases, licenses and other agreements. Borrower shall cause each of its Subsidiaries to protect and defend such Subsidiary's title to its assets from and against all Persons claiming any interest adverse to such Subsidiary, and Borrower shall cause each of its Subsidiaries at all times to keep such Subsidiary's property and assets free and clear from Liens whatsoever (except for Permitted Liens, provided, however, that there shall be no Liens whatsoever on Intellectual Property), and shall give Agent prompt written notice of any legal process that is reasonably likely to result in damages, expenses or liabilities in excess of $500,000.

7.6 Investments. Borrower shall not, directly or indirectly acquire or own, or make any Investment in or to any Person, nor permit any of its Subsidiaries so to do, other than Permitted Investments.

Notwithstanding the foregoing, and for the avoidance of doubt, this Section 7.6 shall not prohibit (i) the conversion by holders of (including any cash payment upon conversion), or required payment of any principal or premium on (including, for the avoidance of doubt, in respect of a required repurchase in connection with the redemption of Permitted Convertible Debt upon satisfaction of a condition related to the stock price of Borrower's common stock) or required payment of any interest with respect to, any Permitted Convertible Debt in each case, in accordance with the terms of the indenture governing such Permitted Convertible Debt provided that principal payments in cash (other than cash in lieu of fractional shares) shall be allowed with respect to any repurchase in connection with the redemption of Permitted Convertible Debt upon satisfaction of a condition related to the stock price of Borrower's common stock only if the Redemption Conditions are satisfied in respect of such redemption and at all times after such redemption, (ii) the entry into (including the payment of premiums in connection therewith) or any required payment with respect to, or required early unwind or settlement of, any Permitted Bond Hedge Transaction or Permitted Warrant Transaction, in each case, in accordance with the terms of the agreement governing such Permitted Bond Hedge Transaction or Permitted Warrant Transaction, or (iii) the withholding of shares of common stock upon the vesting of performance stock units and restricted stock units issued to the Borrower's employees under the Borrower's equity incentive plan upon vesting of such stock units.

Notwithstanding the foregoing, Borrower may repurchase, exchange or induce the conversion of Permitted Convertible Debt by delivery of shares of Borrower's common stock and/or a different series of Permitted Convertible Debt and/or by payment of cash (in an amount that does not exceed the proceeds received by Borrower from the substantially concurrent issuance of shares of Borrower's common stock and/or Permitted Convertible Debt plus the net cash proceeds, if any, received by Borrower pursuant to the related exercise or early unwind or termination of the related Permitted Bond Hedge Transactions and Permitted Warrant Transactions, if any, pursuant to the immediately following proviso); provided that, for the avoidance of doubt, substantially concurrently with, or a commercially reasonable period of time before or after, the related settlement date for the Permitted Convertible Debt that are so repurchased, exchanged or converted, Borrower may exercise or unwind or terminate early (whether in cash, shares or any combination thereof) the portion of the Permitted Bond Hedge Transactions and Permitted Warrant Transactions, if any, corresponding to such Permitted Convertible Debt that are so repurchased, exchanged or converted.

7.7 Distributions. Borrower shall not, nor shall it permit any Subsidiary to, (a) repurchase or redeem any class of stock or other Equity Interest other than the repurchases described in clause (c) of the defined term "Permitted Investments"; (b) declare or pay any cash dividend or make a cash distribution on any class of stock or other Equity Interest, except that a Subsidiary of Borrower may pay dividends or make distributions to Borrower or a Subsidiary of Borrower; (c) lend money to any employees, officers or directors or guarantee the payment of any such loans granted by a third party in excess of $500,000 in the aggregate; or (d) waive, release or forgive any Indebtedness owed by any employees, officers or directors in excess of $500,000 in the aggregate.

Notwithstanding the foregoing, and for the avoidance of doubt, this Section 7.7 shall not prohibit (i) the conversion by holders of (including any cash payment upon conversion), or required payment of any principal or premium on (including, for the avoidance of doubt, in respect of a required repurchase in connection with the redemption of Permitted Convertible Debt upon satisfaction of a condition related to the stock price of Borrower's common stock) or required payment of any interest with respect to, any Permitted Convertible Debt in each case, in accordance with the terms of the indenture governing such Permitted Convertible Debt, (ii) the entry into (including the payment of premiums in connection therewith) or any required payment with respect to, or required early unwind or settlement of, any Permitted Bond Hedge Transaction or Permitted Warrant Transaction, in each case, in accordance with the terms of the agreement governing such Permitted Bond Hedge Transaction or Permitted Warrant Transaction, or (iii) the withholding of shares of common stock upon the vesting of restricted stock units and performance stock units issued to the Borrower's employees under the Borrower's equity incentive plan upon vesting of such stock units and any related cash payments required to be paid to such employees and or any governmental authority on account of Taxes related thereto, in each case in the ordinary course of business of the Borrower.

Notwithstanding the foregoing, Borrower may repurchase, exchange or induce the conversion of Permitted Convertible Debt by delivery of shares of Borrower's common stock and/or a different series of Permitted Convertible Debt and/or by payment of cash (in an amount that does not exceed the proceeds received by Borrower from the substantially concurrent issuance of shares of Borrower's common stock and/or Refinancing Convertible Notes plus the net cash proceeds, if any, received by Borrower pursuant to the related exercise or early unwind or termination of the related Permitted Bond Hedge Transactions and Permitted Warrant Transactions, if any, pursuant to the immediately following proviso); provided that, for the avoidance of doubt, substantially concurrently with, or a commercially reasonable period of time before or after, the related settlement date for the Permitted Convertible Debt that are so repurchased, exchanged or converted, Borrower may exercise or unwind or terminate early (whether in cash, shares or any combination thereof) the portion of the Permitted Bond Hedge Transactions and Permitted Warrant Transactions, if any, corresponding to such Permitted Convertible Debt that are so repurchased, exchanged or converted.

7.8 Transfers. Except for Permitted Transfers, Borrower shall not, and shall not permit any Subsidiary to, voluntarily or involuntarily transfer, sell, lease, license, lend or in any other manner convey any equitable, beneficial or legal interest in any material portion of its assets.

7.9 Mergers or Acquisitions. Borrower shall not merge or consolidate, nor permit any of its Subsidiaries to merge or consolidate, with or into any other business organization, other than mergers or consolidations of (a) a Subsidiary which is not a Loan Party into another Subsidiary or into a Loan Party, or (b) a Loan Party into another Loan Party (provided that Borrower shall be the surviving entity in any transaction involving Borrower), or acquire, or permit any of its Subsidiaries to acquire, in each case including for the avoidance of doubt through a merger, purchase, in-licensing arrangement or any similar transaction, all or substantially all of the capital stock or property of another Person, provided, however, that Borrower shall be permitted to enter into Permitted Acquisitions.

7.10 Taxes. Borrower shall, and shall cause each of its Subsidiaries to, pay when due all material Taxes of any nature whatsoever now or hereafter imposed or assessed against Borrower or such Subsidiary or the Collateral or upon Borrower's (or such Subsidiary's) ownership, possession, use, operation or disposition thereof or upon Borrower's (or such Subsidiary's) rents, receipts or earnings arising therefrom. Borrower shall, and shall cause each of its Subsidiaries to file on or before the due date therefor (taking into account proper extensions) all federal and state income Tax returns and other material Tax returns required to be filed, which Tax returns shall be accurate in all material respects. Notwithstanding the foregoing,

Borrower and its Subsidiaries may contest, in good faith and by appropriate proceedings diligently conducted, Taxes for which Borrower and its Subsidiaries maintain adequate reserves in accordance with GAAP.

7.11 Certain Changes. Neither Borrower nor any Subsidiary shall change its jurisdiction of organization, organizational form or legal name without twenty (20) days' prior written notice to Agent. Neither Borrower nor any Subsidiary shall suffer a Change in Control. Neither Borrower nor any Subsidiary shall relocate its chief executive office or its principal place of business unless: (i) it has provided prior written notice to Agent; and (ii) such relocation shall be within the continental United States of America. Neither Borrower nor any Subsidiary shall relocate any item of Collateral (other than (x) sales of Inventory in the ordinary course of business, (y) relocations of Equipment within the United States having an aggregate value of up to $250,000 in any fiscal year, and (z) relocations of Collateral from a location described on Exhibit B to another location described on Exhibit B) unless (i) it has provided prompt written notice to Agent, (ii) such relocation is within the continental United States of America and (iii) if such relocation is to a third party bailee or landlord, it has used commercially reasonable efforts to deliver a bailee agreement or landlord letter, as applicable, in form and substance reasonably acceptable to Agent.

7.12 Deposit Accounts. Other than Excluded Accounts, neither Borrower nor any Subsidiary (other than an Excluded Subsidiary) shall maintain any Deposit Accounts, or accounts holding Investment Property, except with respect to which Agent has an Account Control Agreement. Borrower shall endeavor to utilize, and shall cause each of its Subsidiaries to endeavor to utilize, SVB for any Bank Services or any other services ancillary or related thereto required by Borrower or its Subsidiaries. In addition to the foregoing, Borrower and any Subsidiary of Borrower shall maintain at least one operating Deposit Account with SVB.

7.13 Joinder of Subsidiaries; Limitation on Foreign Subsidiaries. Borrower shall notify Agent of each Subsidiary formed or acquired subsequent to the Closing Date and, within thirty (30) days of such formation or acquisition, shall cause any such Domestic Subsidiary (other than an Excluded Subsidiary) to execute and deliver to Agent a Joinder Agreement, or, if requested by Agent, a Guaranty and appropriate collateral security documents to secure the obligations pursuant to such Guaranty. Borrower shall not permit Foreign Subsidiaries to maintain Cash balances in excess of $250,000 at any time.

7.14 Regulatory and Product Notices. The Borrower shall promptly (but in any event within five (5) Business Days) after the receipt or occurrence thereof notify Agent of:

(a) any written notice received by Borrower or its Subsidiaries from a governmental authority alleging potential or actual violations of any FDA Laws or Federal Health Care Program Laws by Borrower or its Subsidiaries;

(b) any written notice that the FDA (or international equivalent) is limiting, suspending or revoking any Registrations (including, but not limited to, the issuance of a clinical hold);

(c) any written notice that Borrower or its Subsidiaries has become subject to any Regulatory Action;

(d) the exclusion or debarment from any governmental healthcare program or debarment or disqualification by FDA (or international equivalent) of Borrower or its Subsidiaries;

(e) any written notice that any product of Borrower or its Subsidiaries has been seized, withdrawn, recalled, detained, or subject to a suspension of manufacturing, or the commencement of any

proceedings in the United States or any other jurisdiction seeking the withdrawal, recall, suspension, import detention, or seizure of any Borrower Product are pending or threatened in writing against Borrower or its Subsidiaries; or

(f) narrowing or otherwise limiting the scope of marketing authorization or the labeling of the products of Borrower and its Subsidiaries under any such Registration;

except, in each case of (a) through (f) above, where such action would not reasonably be expected to have, either individually or in the aggregate, any Material Regulatory Liabilities.

7.15 Notification of Event of Default. Borrower shall notify Agent promptly, in any event within three (3) Business Days, of the occurrence of any Event of Default.

7.16 SBA Addendum. One or more affiliates of Agent have received a license from the U.S. Small Business Administration ("SBA") to extend loans as a small business investment company ("SBIC") pursuant to the Small Business Investment Act of 1958, as amended, and the associated regulations (collectively, the "SBIC Act"). Portions of the Loan to Borrower may be made by a Lender that is an SBIC. Addendum 2 to this Agreement outlines various responsibilities of Agent, each Lender and Borrower associated with a loan made by an SBIC, and such Addendum 2 is hereby incorporated in this Agreement.

7.17 Use of Proceeds. Borrower agrees that the proceeds of the Loans shall be used solely to pay related fees and expenses in connection with this Agreement and for working capital and general business purposes. The proceeds of the Loans shall not be used in violation of Anti-Corruption Laws or applicable Sanctions.

7.18 Material Agreement. Borrower shall give prompt written notice to Agent of entering into a Material Agreement or materially amending or terminating a Material Agreement.

7.19 Compliance with Laws.

(a) Borrower shall maintain, and shall cause each of its Subsidiaries to maintain compliance in all material respects with all applicable laws, rules or regulations, and shall, or cause its Subsidiaries to, obtain and maintain all required Registrations reasonably necessary in connection with the conduct of Borrower's business. Borrower shall not become an "investment company" or a company controlled by an "investment company," under the Investment Company Act of 1940, as amended, or undertake as one of its important activities extending credit to purchase or carry margin stock (as defined in Regulation X, T and U of the Federal Reserve Board of Governors).

(b) Neither Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries permit any controlled Affiliate to, directly or indirectly, knowingly enter into any documents, instruments, agreements or contracts with any Person listed on the OFAC Lists. Neither Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries permit any controlled Affiliate to, directly or indirectly, (i) conduct any business or engage in any transaction or dealing with any Blocked Person, including, without limitation, the making or receiving of any contribution of funds, goods or services to or for the benefit of any Blocked Person, (ii) deal in, or otherwise engage in any transaction relating to, any property or interests in property blocked pursuant to Executive Order No. 13224 or any similar executive order or other Anti-Terrorism Law, or (iii) engage in or conspire to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding, or attempts to violate, any of the prohibitions set forth in Executive Order No. 13224 or other Anti-Terrorism Law.

(c) Borrower has implemented and shall maintain in effect policies and procedures designed to reasonably ensure compliance by Borrower and its Subsidiaries and their respective directors, officers, employees and agents with Anti-Corruption Laws and applicable Sanctions, and Borrower and its Subsidiaries and their respective officers and employees and to the knowledge Borrower, its directors and agents, are in compliance with Anti-Corruption Laws and applicable Sanctions in all material respects

(d) Neither Borrower nor its Subsidiaries nor any of their respective directors, officers or employees, or to the knowledge of Borrower, any agent for Borrower or any of its Subsidiaries that shall act in any capacity in connection with or benefit from the credit facility established hereby, is a Sanctioned Person. No Loan, use of proceeds or other transaction contemplated by this Agreement shall violate Anti-Corruption Laws or applicable Sanctions.

7.20 Financial Covenants.

(a) Minimum Cash.

(i) Beginning on April 1, 2023, and at all times thereafter so long as Borrower's Market Capitalization is no greater than $400,000,000, Borrower shall maintain Qualified Cash in an amount greater than or equal to the product of (x) the then-outstanding principal amount of the Term Loan Advances, *multiplied by* (y) (i) prior to the Performance Milestone IV Date, 0.55 and (ii) at all times after the Performance Milestone IV Date, 0.45.

(ii) If Borrower makes a redemption or any other cash payment in respect of Permitted Convertible Debt, subject to satisfaction of the Redemption Conditions, Borrower shall, at all times thereafter, maintain Qualified Cash in the amount required by the defined term "Redemption Conditions."

7.21 Intellectual Property. Borrower shall (i) protect, defend and maintain the validity and enforceability of its Intellectual Property; (ii) promptly advise Agent in writing of material infringements of its Intellectual Property; and (iii) not allow any Intellectual Property material to Borrower's business to be abandoned, forfeited or dedicated to the public without Agent's written consent.

7.22 Transactions with Affiliates. Borrower shall not, and shall not permit any Subsidiary to, directly or indirectly, enter into or permit to exist any transaction of any kind with any Affiliate of Borrower or such Subsidiary on terms that are less favorable to Borrower or such Subsidiary, as the case may be, than those that might be obtained in an arm's length transaction from a Person who is not an Affiliate of Borrower or such Subsidiary, other than (a) any equity investments in Borrower by existing investors of Borrower not constituting a Change of Control, or Subordinated Indebtedness, (b) any compensation, director indemnification or similar arrangements in the ordinary course of business of Borrower and as approved by Borrower's Board, (c) any intercompany arrangements entered into in the ordinary course of business and not prohibited hereunder, or (d) any transaction otherwise permitted under this Section 7.

SECTION 8
RIGHT TO INVEST

8.1 Right to Invest. Borrower shall use commercially reasonable efforts to provide the Lenders or their permitted assignees or nominees, designated as such in writing to Borrower, the opportunity, in their discretion, to participate in each Subsequent Financing in an amount of up to the lesser of (x) an amount equal to 5% of such Subsequent Financing and (y) $5,000,000, in the aggregate for all Lenders and their permitted assignees or nominees, in such Subsequent Financing on substantially the same terms,

conditions and pricing afforded to other investors participating in such Subsequent Financing. If the Lenders (or their permitted assignees or nominees) elect to participate in any Subsequent Financing, the Lenders (or their permitted assignees or nominees, as applicable) participating in such Subsequent Financing agree to become a party to the agreements executed by the other investors participating in such Subsequent Financing, including with respect to obligations of confidentiality or as may otherwise be required by the Securities Act of 1933, as amended, and the rules and regulations promulgated by the Securities and Exchange Commission thereunder. Borrower, or an investment bank or underwriter engaged on Borrower's behalf, shall provide the Lenders or their permitted assignees or nominees at least three (3) Business Days' written notice of any planned Subsequent Financing and the opportunity to exercise the right to invest under this Section 8.1 with respect to any such Subsequent Financing. This Section 8.1, and all rights and obligations hereunder, shall terminate upon the earliest to occur of (a) termination of this Agreement or (b) such time that the Lenders or their permitted assignees or nominees have purchased $5,000,000 of Borrower's Equity Interests in the aggregate in Subsequent Financings.

SECTION 9
EVENTS OF DEFAULT

The occurrence of any one or more of the following events shall be an Event of Default:

9.1 Payments. A Loan Party fails to (a) pay principal or interest on any Loan on its due date or (b) make any payment when due on account of any other Secured Obligations within two (2) Business Days after the applicable due date; provided, however, that in each case an Event of Default shall not occur on account of a failure to pay due solely to an administrative or operational error of Agent or Lenders or Borrower's bank if Borrower had the funds to make the payment when due and makes the payment within three (3) Business Days following Borrower's knowledge of such failure to pay; or

9.2 Covenants. A Loan Party breaches or defaults in the performance of any covenant or Secured Obligation under this Agreement, or any of the other Loan Documents or any other agreement among any Loan Party, Agent and Lenders, and (a) with respect to a default under any covenant under this Agreement other than the Sections specifically identified in clause (b) hereof, any other Loan Document or any other agreement between any Loan Party and Agent or Lenders, and such default continues for more than fifteen (15) Business Days after the earlier of the date on which (i) Agent or Lenders has given notice of such default to Borrower and (ii) Borrower has actual knowledge of such default (provided that, with respect to a default due to a failure to comply with Section 7.12 with respect to any new account, Borrower shall be deemed to have knowledge of the default as of the time such account is opened) or (b) with respect to a default under any of Sections 4.4, 6, 7.1, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.14, 7.15, 7.16, 7.17, 7.20, 7.21 and 7.22, the occurrence of such default; or

9.3 Material Adverse Effect. A circumstance has occurred that could reasonably be expected to have a Material Adverse Effect; provided that, solely for purposes of this Section 9.3, the failure to achieve Performance Milestone I, Performance Milestone II, Performance Milestone III or Performance Milestone IV shall not in and of itself constitute a Material Adverse Effect under this Section 9.3; or

9.4 Representations. Any representation or warranty made by any Loan Party in any Loan Document, when taken as a whole, shall have been false or misleading in any material respect when made or when deemed made; or

9.5 Insolvency. Any Loan Party (i) (A) shall make an assignment for the benefit of creditors; or (B) shall be unable to pay its debts as they become due; or (C) shall file a voluntary petition in bankruptcy; or (D) shall file any petition, answer, or document seeking for itself any reorganization, arrangement,

composition, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation pertinent to such circumstances; or (E) shall seek or consent to or acquiesce in the appointment of any trustee, receiver, or liquidator of any Loan Party or of all or any substantial part (i.e. 33-1/3% or more) of the assets or property of any Loan Party; or (F) shall cease operations of its business as its business has normally been conducted, or terminate substantially all of its employees; or (G) any Loan Party or its directors or a majority of the holders of its Equity Interests shall take any action initiating any of the foregoing actions described in clauses (A) through (F); or (ii) either (A) forty-five (45) days shall have expired after the commencement of an involuntary action against any Loan Party seeking reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation, without such action being dismissed or all orders or proceedings thereunder affecting the operations or the business of any Loan Party being stayed; or (B) a stay of any such order or proceedings shall thereafter be set aside and the action setting it aside shall not be timely appealed; or (C) any Loan Party shall file any answer admitting or not contesting the material allegations of a petition filed against such Loan Party in any such proceedings; or (D) the court in which such proceedings are pending shall enter a decree or order granting the relief sought in any such proceedings; or (E) forty-five (45) days shall have expired after the appointment, without the consent or acquiescence of any Loan Party, of any trustee, receiver or liquidator of such Loan Party or of all or any part of the properties of such Loan Party without such appointment being vacated; or

9.6 Attachments; Judgments. Any portion of any Loan Party's assets in aggregate value of $500,000 or more, is attached or seized, or a levy is filed against any such assets, or a judgment or judgments is/are entered for the payment of money (not covered by independent third party insurance as to which liability has not been rejected by such insurance carrier) individually or in the aggregate, of at least $750,000, or any Loan Party is enjoined or in any way prevented by court order from conducting any part of its business; or

9.7 Other Obligations.

(a) The occurrence of any default under any agreement or obligation of any Loan Party involving any Indebtedness in excess of $750,000; or

(b) Any early payment is required or unwinding or termination occurs with respect to any Permitted Bond Hedge Transaction and Permitted Warrant Transaction, or any condition giving rise to the foregoing is met, in each case, with respect to which Borrower or its Affiliates is the "defaulting party" under the terms of such Permitted Bond Hedge Transaction or Permitted Warrant Transaction.

SECTION 10
REMEDIES

10.1 General. Upon and during the continuance of any one or more Events of Default, Agent, as directed by each Lender in accordance with Addendum 5 or, if such rights and remedies are not addressed in Addendum 5, as directed by the Required Lenders shall, accelerate and demand payment of all or any part of the Secured Obligations together with a Prepayment Charge and declare them to be immediately due and payable (provided, that upon the occurrence of an Event of Default of the type described in Section 9.5, all of the Secured Obligations (including, without limitation, the Prepayment Charge and the End of Term Charge) shall automatically be accelerated and made due and payable, in each case without any further notice or act). Borrower hereby irrevocably appoints Agent as its lawful attorney-in-fact to: exercisable following the occurrence of an Event of Default, (i) sign Borrower's name on any invoice or bill of lading for any account or drafts against account debtors; (ii) demand, collect, sue, and give releases to any account debtor for monies due, settle and adjust disputes and claims about the accounts directly with

account debtors, and compromise, prosecute, or defend any action, claim, case, or proceeding about any Collateral (including filing a claim or voting a claim in any bankruptcy case in Agent's or Borrower's name, as Agent may elect); (iii) make, settle, and adjust all claims under Borrower's insurance policies; (iv) pay, contest or settle any Lien, charge, encumbrance, security interest, or other claim in or to the Collateral, or any judgment based thereon, or otherwise take any action to terminate or discharge the same; (v) transfer the Collateral into the name of Agent or a third party as the UCC permits; and (vi) receive, open and dispose of mail addressed to Borrower. Borrower hereby appoints Agent as its lawful attorney-in-fact to sign Borrower's name on any documents necessary to perfect or continue the perfection of Agent's security interest in the Collateral regardless of whether an Event of Default has occurred until all Secured Obligations have been satisfied in full (and any obligations under Bank Services Agreements that constitute Secured Obligations have been cash collateralized in accordance with Section 3.3 of this Agreement) and the Loan Documents have been terminated. Agent's foregoing appointment as Borrower's attorney in fact, and all of Agent's rights and powers, coupled with an interest, are irrevocable until all Secured Obligations have been fully repaid and performed (and any obligations under Bank Services Agreements that constitute Secured Obligations have been cash collateralized in accordance with Section 3.3 of this Agreement) and the Loan Documents have been terminated. Agent may, and as directed by each Lender in accordance with Addendum 5 shall, exercise all rights and remedies with respect to the Collateral under the Loan Documents or otherwise available to it under the UCC and other applicable law, including the right to release, hold, sell, lease, liquidate, collect, realize upon, or otherwise dispose of all or any part of the Collateral and the right to occupy, utilize, process and commingle the Collateral. All Agent's rights and remedies shall be cumulative and not exclusive.

10.2 Collection; Foreclosure. Upon the occurrence and during the continuance of any Event of Default, Agent may, and as directed by each Lender in accordance with Addendum 5 shall, at any time or from time to time, apply, collect, liquidate, sell in one or more sales, lease or otherwise dispose of, any or all of the Collateral, in its then condition or following any commercially reasonable preparation or processing, in such order as Agent may elect. Any such sale may be made either at public or private sale at its place of business or elsewhere. Borrower agrees that any such public or private sale may occur upon ten (10) calendar days' prior written notice to Borrower. Agent may require Borrower to assemble the Collateral and make it available to Agent at a place designated by Agent that is reasonably convenient to Agent and Borrower. The proceeds of any sale, disposition or other realization upon all or any part of the Collateral shall be applied by Agent in the following order of priorities:

(a) First, to Agent, in an amount equal to the sum of all fees owing to Agent hereunder;

(b) Second, to Agent and Lenders in an amount sufficient to pay in full Agent's and Lenders' reasonable and documented costs and professionals' and advisors' fees and expenses as described in Section 11.12;

(c) Third, to Lenders, ratably, in an amount equal to the sum of all accrued interest owning to the Lenders on the Term Loan Advances hereunder;

(d) Fourth, to Lenders, ratably, in an amount equal to the sum of the outstanding principal and premium, if any owing to Lenders from Borrower on the Term Loan Advances hereunder;

(e) Fifth, to Lenders and Agent, ratably (in proportion to all remaining Secured Obligations owing to each) in an amount equal to the sum of all other outstanding and unpaid Secured Obligations (including principal, interest, subject to increase in accordance with Section 2.3); and

(f) Finally, after the full and final payment in Cash of all of the Secured Obligations (other than inchoate obligations and any obligations under Bank Services Agreements constituting Secured Obligations have been cash collateralized in accordance with Section 3.3 of this Agreement), to any creditor holding a junior Lien on the Collateral, or to Borrower or its representatives or as a court of competent jurisdiction may direct.

Agent shall be deemed to have acted reasonably in the custody, preservation and disposition of any of the Collateral if it complies with the obligations of a secured party under the UCC.

10.3 No Waiver. Agent shall be under no obligation to marshal any of the Collateral for the benefit of Borrower or any other Person, and Borrower expressly waives all rights, if any, to require Agent to marshal any Collateral.

10.4 Waivers. Borrower waives demand, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees held by Agent on which Borrower is liable.

10.5 Cumulative Remedies. The rights, powers and remedies of Agent hereunder shall be in addition to all rights, powers and remedies given by statute or rule of law and are cumulative. The exercise of any one or more of the rights, powers and remedies provided herein shall not be construed as a waiver of or election of remedies with respect to any other rights, powers and remedies of Agent.

SECTION 11
MISCELLANEOUS

11.1 Severability. Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement shall be prohibited by or invalid under such law, such provision shall be ineffective only to the extent and duration of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement.

11.2 Notice. Except as otherwise provided herein, any notice, demand, request, consent, approval, declaration, service of process or other communication (including the delivery of Financial Statements) that is required, contemplated, or permitted under the Loan Documents or with respect to the subject matter hereof shall be in writing, and shall be deemed to have been validly served, given, delivered, and received upon the earlier of: (i) the day of transmission by electronic mail or hand delivery or delivery by an overnight express service or overnight mail delivery service; or (ii) the third calendar day after deposit in the United States of America mails, with proper first class postage prepaid, in each case addressed to the party to be notified as follows:

(a) If to Agent:

HERCULES CAPITAL, INC.
Legal Department
Attention: Chief Legal Officer and Cristy Barnes
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
email: [**]
Telephone: 650-289-3060

(b) If to Lenders:

HERCULES CAPITAL, INC.
Legal Department
Attention: Chief Legal Officer and Cristy Barnes
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
email: [**]
Telephone: 650-289-3060

SILICON VALLEY BANK
505 Howard Street, Floor 3
San Francisco, California 94105
Attn: Peter Sletteland and Reilley May
Email: [**]

(c) If to Borrower:

Gritstone bio, Inc.
Attention: Celia Economides; Rahsaan Thompson
5959 Horton Street, Suite 300
Emeryville, CA 94608
email: [**]
Telephone: (510) 871-6100

with a copy to
Latham & Watkins LLP
Attention: Brian Cuneo
140 Scott Drive
Menlo Park, CA 94025
Email: [**]
Telephone: 650-463-3014

or to such other address as each party may designate for itself by like notice.

11.3 Entire Agreement; Amendments.

(a) This Agreement and the other Loan Documents constitute the entire agreement and understanding of the parties hereto in respect of the subject matter hereof and thereof, and supersede and replace in their entirety any prior proposals, term sheets, non-disclosure or confidentiality agreements, letters, negotiations or other documents or agreements, whether written or oral, with respect to the subject matter hereof or thereof (including the proposal letter of Hercules and SVB dated May 28, 2022 and accepted by Borrower on May 28, 2022 and the Non-Disclosure Agreement).

(b) Neither this Agreement, any other Loan Document, nor any terms hereof or thereof may be amended, supplemented or modified except in accordance with the provisions of this Section 11.3(b). The Required Lenders and Loan Parties party to the relevant Loan Document may, or, with the written consent of the Required Lenders, Agent and Loan Parties party to the relevant Loan Document may, from time to time, (i) enter into written amendments, supplements or modifications hereto and to the other Loan Documents for the purpose of adding any provisions to this Agreement or the other Loan Documents

or changing in any manner the rights of Lenders or of Loan Parties hereunder or thereunder or (ii) waive, on such terms and conditions as the Required Lenders or Agent, as the case may be, may specify in such instrument, any of the requirements of this Agreement or the other Loan Documents or any default or Event of Default and its consequences; provided, however, that no such waiver and no such amendment, supplement or modification shall (A) forgive the principal amount or extend the final scheduled date of maturity of any Loan, extend the scheduled date of any amortization payment in respect of any Term Loan Advance, reduce the stated rate of any interest or fee payable hereunder, or extend the scheduled date of any payment thereof, in each case without the written consent of each Lender directly affected thereby; (B) eliminate or reduce the voting rights of any Lender under this Section 11.3(b) without the written consent of such Lender; (C) reduce any percentage specified in the definition of Required Lenders, consent to the assignment or transfer by Loan Parties of any of its rights and obligations under this Agreement and the other Loan Documents, release all or substantially all of the Collateral or release a Loan Party from its obligations under the Loan Documents, in each case without the written consent of all Lenders; or (D) amend, modify or waive any provision of Section 11.17 without the written consent of Agent. Any such waiver and any such amendment, supplement or modification shall apply equally to each Lender and shall be binding upon the applicable Loan Parties, Lenders, Agent and all future holders of the Loans.

11.4 No Strict Construction. The parties hereto have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by the parties hereto and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any provisions of this Agreement.

11.5 No Waiver. The powers conferred upon Agent and Lenders by this Agreement are solely to protect their rights hereunder and under the other Loan Documents and their interest in the Collateral and shall not impose any duty upon Agent or Lenders to exercise any such powers. No omission or delay by Agent or Lenders at any time to enforce any right or remedy reserved to them, or to require performance of any of the terms, covenants or provisions hereof by Borrower at any time designated, shall be a waiver of any such right or remedy to which Agent or Lenders is entitled, nor shall it in any way affect the right of Agent or Lenders to enforce such provisions thereafter.

11.6 Survival. All agreements, representations and warranties contained in this Agreement and the other Loan Documents or in any document delivered pursuant hereto or thereto shall be for the benefit of Agent, Lenders and Borrower, as applicable, and shall survive the execution and delivery of this Agreement. Sections 6.3, 11.8, 11.9, 11.10, 11.14, 11.15 and 11.17, shall survive the termination of this Agreement.

11.7 Successors and Assigns. The provisions of this Agreement and the other Loan Documents shall inure to the benefit of and be binding on Borrower and its permitted assigns (if any). No Loan Party shall assign its obligations under this Agreement or any of the other Loan Documents without Agent's express prior written consent, and any such attempted assignment shall be void and of no effect. Agent and Lenders may assign, transfer, or endorse its rights hereunder and under the other Loan Documents without prior notice to Borrower, and all of such rights shall inure to the benefit of Agent's and Lenders' successors and assigns; provided that as long as no Event of Default has occurred and is continuing, neither Agent nor any Lenders may assign, transfer or endorse its rights hereunder or under the Loan Documents to any party that is a direct competitor of Borrower or a distressed debt or vulture fund (as reasonably determined by Agent), it being acknowledged that in all cases, any transfer to a controlled Affiliate of any Lenders or Agent shall be allowed. Notwithstanding the foregoing, (x) in connection with any assignment by a Lender as a result of a forced divestiture at the request of any regulatory agency, the restrictions set forth herein shall not apply and Agent and Lenders may assign, transfer or indorse its rights hereunder and under the

other Loan Documents to any Person or party and (y) in connection with a Lender's own financing or securitization transactions, the restrictions set forth herein shall not apply and Agent and Lenders may assign, transfer or indorse its rights hereunder and under the other Loan Documents to any Person or party providing such financing or formed to undertake such securitization transaction and any transferee of such Person or party upon the occurrence of a default, event of default or similar occurrence with respect to such financing or securitization transaction; provided that no such sale, transfer, pledge or assignment under this clause (y) shall release such Lender from any of its obligations hereunder or substitute any such Person or party for such Lender as a party hereto until Agent shall have received and accepted an effective assignment agreement from such Person or party in form satisfactory to Agent executed, delivered and fully completed by the applicable parties thereto, and shall have received such other information regarding such assignee as Agent reasonably shall require. Agent, acting solely for this purpose as an agent of Borrower, shall maintain at one of its offices in the United States a register for the recordation of the names and addresses of Lender(s), Term Commitments of, and principal amounts (and stated interest) of the Loans owing to, each Lender pursuant to the terms hereof from time to time (the "Register"). The entries in the Register shall be conclusive absent manifest error, and Borrower, Agent and Lender shall treat each Person whose name is recorded in the Register pursuant to the terms hereof as a Lender hereunder for all purposes of this Agreement. The Register shall be available for inspection by Borrower and any Lender, at any reasonable time and from time to time upon reasonable prior notice.

11.8 Participations. Each Lender that sells a participation shall, acting solely for this purpose as a non-fiduciary agent of the Borrower, maintain a register on which it enters the name and address of each participant and the principal amounts (and stated interest) of each participant's interest in the Loans or other obligations under the Loan Documents (the "Participant Register"); provided that no Lender shall have any obligation to disclose all or any portion of the Participant Register (including the identity of any participant or any information relating to a participant's interest in any commitments, loans, its other obligations under any Loan Document) to any Person except to the extent that such disclosure is necessary to establish that such commitment, loan, letter of credit or other obligation is in registered form under Section 5f.103-1(c) of the United States Treasury Regulations. The entries in the Participant Register shall be conclusive absent manifest error, and such Lender shall treat each Person whose name is recorded in the Participant Register as the owner of such participation for all purposes of this Agreement notwithstanding any notice to the contrary. For the avoidance of doubt, the Agent (in its capacity as Agent) shall have no responsibility for maintaining a Participant Register. Borrower agrees that each participant shall be entitled to the benefits of the provisions in Addendum 1 attached hereto (subject to the requirements and limitations therein, including the requirements under Section 7 of Addendum 1 attached hereto (it being understood that the documentation required under Section 7 of Addendum 1 attached hereto shall be delivered to the participating Lender)) to the same extent as if it were a Lender and had acquired its interest by assignment pursuant to Section 11.7; provided that such participant shall not be entitled to receive any greater payment under Addendum 1 attached hereto, with respect to any participation, than its participating Lender would have been entitled to receive, except to the extent such entitlement to receive a greater payment results from a change in law that occurs after the participant acquired the applicable participation.

11.9 Governing Law. This Agreement and the other Loan Documents have been negotiated and delivered to Agent and Lenders in the State of California, and shall have been accepted by Agent and Lenders in the State of California. Payment to Agent and Lenders by Borrower of the Secured Obligations is due in the State of California. This Agreement and the other Loan Documents shall be governed by, and construed and enforced in accordance with, the laws of the State of California, excluding conflict of laws principles that would cause the application of laws of any other jurisdiction.

11.10 Consent to Jurisdiction and Venue. All judicial proceedings (to the extent that the reference requirement of Section 11.10 is not applicable) arising in or under or related to this Agreement or any of

the other Loan Documents may be brought in any state or federal court located in the State of California. By execution and delivery of this Agreement, each party hereto generally and unconditionally: (a) consents to nonexclusive personal jurisdiction in Santa Clara County, State of California; (b) waives any objection as to jurisdiction or venue in Santa Clara County, State of California; (c) agrees not to assert any defense based on lack of jurisdiction or venue in the aforesaid courts; and (d) irrevocably agrees to be bound by any judgment rendered thereby in connection with this Agreement or the other Loan Documents. Service of process on any party hereto in any action arising out of or relating to this Agreement shall be effective if given in accordance with the requirements for notice set forth in Section 11.2, and shall be deemed effective and received as set forth in Section 11.2. Nothing herein shall affect the right to serve process in any other manner permitted by law or shall limit the right of either party to bring proceedings in the courts of any other jurisdiction.

11.11 Mutual Waiver of Jury Trial / Judicial Reference.

(a) Because disputes arising in connection with complex financial transactions are most quickly and economically resolved by an experienced and expert Person and the parties wish applicable state and federal laws to apply (rather than arbitration rules), the parties desire that their disputes be resolved by a judge applying such applicable laws. EACH OF BORROWER AGENT AND LENDERS SPECIFICALLY WAIVES ANY RIGHT IT MAY HAVE TO TRIAL BY JURY OF ANY CAUSE OF ACTION, CLAIM, CROSS-CLAIM, COUNTERCLAIM, THIRD PARTY CLAIM OR ANY OTHER CLAIM (COLLECTIVELY, "CLAIMS") ASSERTED BY BORROWER AGAINST AGENT, LENDERS OR THEIR RESPECTIVE ASSIGNEE OR BY AGENT, LENDERS OR THEIR RESPECTIVE ASSIGNEE AGAINST BORROWER. This waiver extends to all such Claims, including Claims that involve Persons other than Agent, Borrower or any Lenders; Claims that arise out of or are in any way connected to the relationship among Borrower, Agent and Lenders; and any Claims for damages, breach of contract, tort, specific performance, or any equitable or legal relief of any kind, arising out of this Agreement, any other Loan Document.

(b) If the waiver of jury trial set forth in Section 11.10(a) is ineffective or unenforceable, the parties agree that all Claims shall be resolved by reference to a private judge sitting without a jury, pursuant to Code of Civil Procedure Section 638, before a mutually acceptable referee or, if the parties cannot agree, a referee selected by the Presiding Judge of the Santa Clara County, California. Such proceeding shall be conducted in Santa Clara County, California, with California rules of evidence and discovery applicable to such proceeding.

(c) In the event Claims are to be resolved by judicial reference, either party may seek from a court identified in Section 11.9, any prejudgment order, writ or other relief and have such prejudgment order, writ or other relief enforced to the fullest extent permitted by law notwithstanding that all Claims are otherwise subject to resolution by judicial reference.

11.12 Professional Fees. Borrower promises to pay Agent's and Lenders' reasonable documented out-of-pocket fees and expenses necessary to finalize the loan documentation, including but not limited to reasonable and documented attorneys' fees, UCC searches, filing costs, and other miscellaneous expenses, provided that the Due Diligence Fee shall be applied in its entirety to the Lenders' non-legal transaction costs and due diligence expenses. In addition, Borrower promises to pay any and all reasonable documented out-of-pocket attorneys' and other professionals' fees and expenses incurred by Agent and Lenders after the Closing Date in connection with or related to: (a) the Loan; (b) the administration, collection, or enforcement of the Loan; (c) the amendment or modification of the Loan Documents; (d) any waiver, consent, release, or termination under the Loan Documents; (e) the protection, preservation, audit, field exam, sale, lease, liquidation, or disposition of Collateral or the exercise of

remedies with respect to the Collateral; (f) any legal, litigation, administrative, arbitration, or out of court proceeding in connection with or related to Borrower or the Collateral, and any appeal or review thereof; and (g) any bankruptcy, restructuring, reorganization, assignment for the benefit of creditors, workout, foreclosure, or other action related to Borrower, the Collateral, the Loan Documents, including representing Agent or Lenders in any adversary proceeding or contested matter commenced or continued by or on behalf of Borrower's estate, and any appeal or review thereof.

11.13 Confidentiality. Agent and Lenders acknowledge that certain items of Collateral and information provided to Agent and Lenders by Borrower are confidential and proprietary information of Borrower, if and to the extent such information either (i) is marked as confidential by Borrower at the time of disclosure, or (ii) should reasonably be understood to be confidential (the "Confidential Information"). Accordingly, Agent and Lenders agree that any Confidential Information it may obtain in the course of acquiring, administering, or perfecting Agent's security interest in the Collateral shall not be disclosed to any other Person or entity in any manner whatsoever, in whole or in part, without the prior written consent of Borrower, except that Agent and Lenders may disclose any such information: (a) to its Affiliates and its partners, lenders, directors, officers, employees, agents, advisors, accountants, counsel, representative and other professional advisors if Agent or Lenders in their reasonable discretion determines that any such party should have access to such information in connection with such party's responsibilities in connection with the Loan or this Agreement and, provided that such recipient of such Confidential Information either (i) agrees to be bound by the confidentiality provisions of this paragraph or (ii) is otherwise subject to confidentiality restrictions that reasonably protect against the disclosure of Confidential Information pursuant to similar terms; (b) if such information is generally available to the public or to the extent such information becomes publicly available other than as a result of a breach of this Section or becomes available to Agent or any Lender, or any of their respective Affiliates on a non-confidential basis from a source other than Borrower and not in violation of any confidentiality obligations known to the Agent or such Lender; (c) if required or appropriate in any report, statement or testimony submitted to any governmental authority having or claiming to have jurisdiction over Agent or Lenders and any rating agency; (d) if required or appropriate in response to any summons or subpoena or in connection with any litigation, to the extent permitted or deemed advisable by Agent's or Lenders' counsel; (e) to comply with any legal requirement or law applicable to Agent or Lenders or demanded by any governmental authority; (f) to the extent reasonably necessary in connection with the exercise of, or preparing to exercise, or the enforcement of, or preparing to enforce, any right or remedy under any Loan Document, including Agent's sale, lease, or other disposition of Collateral after default, or any action or proceeding relating to any Loan Document; (g) to any participant or assignee of Agent or Lenders or any prospective participant or assignee; provided, that such participant or assignee or prospective participant or assignee is subject to confidentiality restrictions no less protective than the provisions of this Section 11.13; (h) otherwise to the extent consisting of general portfolio information that does not identify Borrower; (i) to any investor or potential investor (and each of their respective Affiliates or clients) in the Agent or Lender (or each of their respective Affiliates); provided that such investor, potential investor, Affiliate or client is subject to confidentiality obligations with respect to the Confidential Information; or (j) otherwise with the prior consent of Borrower; provided, that any disclosure made in violation of this Agreement shall not affect the obligations of Borrower or any of its Affiliates or any guarantor under this Agreement or the other Loan Documents. Agent's and Lenders' obligations under this Section 11.13 shall supersede all of their respective obligations under the Non-Disclosure Agreement.

11.14 Assignment of Rights. Borrower acknowledges and understands that Agent or Lenders may, subject to Section 11.7, sell and assign all or part of its interest hereunder and under the Loan Documents to any Person or entity (an "Assignee"). After such assignment the term "Agent" or "Lender" as used in the Loan Documents shall mean and include such Assignee, and such Assignee shall be vested with all rights, powers and remedies, and subject to all obligations (including the obligations set forth under

Section 7 of Addendum 1 attached hereto), of Agent and Lenders hereunder with respect to the interest so assigned; but with respect to any such interest not so transferred, Agent and Lenders shall retain all rights, powers and remedies hereby given. No such assignment by Agent or Lenders shall relieve Borrower of any of its obligations hereunder. Lenders agree that in the event of any transfer by it of any promissory notes, it shall endorse thereon a notation as to the portion of the principal of such promissory notes, which shall have been paid at the time of such transfer and as to the date to which interest shall have been last paid thereon.

11.15 Revival of Secured Obligations; Termination. Other than as set forth in Section 11.6, this Agreement and the other Loan Documents shall terminate on the payment in full in cash of the Secured Obligations (other than any obligations that specifically survive termination). Notwithstanding the preceding sentence, this Agreement and the Loan Documents shall remain in full force and effect and continue to be effective if any petition is filed by or against Borrower for liquidation or reorganization, if Borrower becomes insolvent or makes an assignment for the benefit of creditors, if a receiver or trustee is appointed for all or any significant part of Borrower's assets, or if any payment or transfer of Collateral is recovered from Agent or Lenders. The Loan Documents and the Secured Obligations and Collateral security shall continue to be effective, or shall be revived or reinstated, as the case may be, if at any time payment and performance of the Secured Obligations or any transfer of Collateral to Agent, or any part thereof is rescinded, avoided or avoidable, reduced in amount, or must otherwise be restored or returned by, or is recovered from, Agent, Lenders or by any obligee of the Secured Obligations (other than obligations that survive termination), whether as a "voidable preference," "fraudulent conveyance," or otherwise, all as though such payment, performance, or transfer of Collateral had not been made. In the event that any payment, or any part thereof, is rescinded, reduced, avoided, avoidable, restored, returned, or recovered, the Loan Documents and the Secured Obligations shall be deemed, without any further action or documentation, to have been revived and reinstated except to the extent of the full and final payment to Agent or Lenders in cash.

11.16 Counterparts. This Agreement and any amendments, waivers, consents or supplements hereto may be executed in any number of counterparts, and by different parties hereto in separate counterparts, each of which when so delivered shall be deemed an original, but all of which counterparts shall constitute but one and the same instrument.

11.17 No Third Party Beneficiaries. No provisions of the Loan Documents are intended, nor will be interpreted, to provide or create any third-party beneficiary rights or any other rights of any kind in any Person other than Agent, Lenders and Borrower unless specifically provided otherwise herein, and, except as otherwise so provided, all provisions of the Loan Documents shall be personal and solely among Agent, Lenders and the Loan Parties which are a party thereto.

11.18 Agency. Agent and each Lender hereby agree to the terms and conditions set forth on Addendum 3 attached hereto. Borrower acknowledges and agrees to the terms and conditions set forth on Addendum 3 attached hereto.

11.19 Publicity. None of the parties hereto nor any of its respective member businesses and Affiliates shall, without the other parties' prior written consent (which shall not be unreasonably withheld or delayed), publicize or use (a) the other party's name (including a brief description of the relationship among the parties hereto), logo or hyperlink to such other parties' web site, separately or together, in written and oral presentations, advertising, promotional and marketing materials, client lists, public relations materials or on its web site (together, the "Publicity Materials"); (b) the names of officers of such other parties in the Publicity Materials; and (c) such other parties' name, trademarks, servicemarks in any news or press release concerning such party; provided, however, notwithstanding anything to the contrary herein,

no such consent shall be required (i) to the extent necessary to comply with the requests of any regulators, legal requirements or laws applicable to such party, pursuant to any listing agreement with any national securities exchange (so long as such party provides prior notice to the other party hereto to the extent reasonably practicable) and (ii) to comply with Section 11.13.

11.20 Multiple Borrowers. If another party is joined as a Borrower hereunder after the Closing Date, each Borrower hereby agrees to the terms and conditions set forth on Addendum 4 attached hereto.

11.21 Electronic Execution of Certain Other Documents. The words "execution," "execute," "signed," "signature," and words of like import in or related to any document to be signed in connection with this Agreement and the transactions contemplated hereby (including without limitation assignments, assumptions, amendments, waivers and consents) shall be deemed to include electronic signatures, the electronic matching of assignment terms and contract formations on electronic platforms approved by the Agent, or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the California Uniform Electronic Transaction Act, or any other similar state laws based on the Uniform Electronic Transactions Act.

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Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

IN WITNESS WHEREOF, Borrower, Agent and Lenders have duly executed and delivered this Loan and Security Agreement as of the date set forth above.

BORROWER:

GRITSTONE BIO, INC.

Signature: /s/ Andrew Allen
Print Name: Andrew Allen
Title: President and Chief Executive Officer

[SIGNATURE PAGE TO LOAN AND SECURITY AGREEMENT]

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

IN WITNESS WHEREOF, Borrower, Agent and Lenders have duly executed and delivered this Loan and Security Agreement as of the date set forth above.

AGENT:

HERCULES CAPITAL, INC.

Signature: /s/ Seth Meyer
Print Name: Seth Meyer
Title: Chief Financial Officer

LENDERS:

HERCULES CAPITAL, INC.

Signature: /s/ Seth Meyer
Print Name: Seth Meyer
Title: Chief Financial Officer

[SIGNATURE PAGE TO LOAN AND SECURITY AGREEMENT]

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

IN WITNESS WHEREOF, Borrower, Agent and Lenders have duly executed and delivered this Loan and Security Agreement as of the date set forth above.

SILICON VALLEY BANK

Signature: /s/ Peter A. Sletteland
Print Name: Peter A. Sletteland
Title: Vice President

[SIGNATURE PAGE TO LOAN AND SECURITY AGREEMENT]

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

Table of Addenda, Exhibits and Schedules

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

ADDENDUM 1 to LOAN AND SECURITY AGREEMENT

TAXES; INCREASED COSTS

1. **Defined Terms**. For purposes of this Addendum 1:

a. "**Connection Income Taxes**" means Other Connection Taxes that are imposed on or measured by net income (however denominated) or that are franchise Taxes or branch profits Taxes.

b. "**Excluded Taxes**" means any of the following Taxes imposed on or with respect to a Recipient or required to be withheld or deducted from a payment to a Recipient, (i) Taxes imposed on or measured by net income (however denominated), franchise Taxes, and branch profits Taxes, in each case, (A) imposed as a result of such Recipient being organized under the laws of, or having its principal office or, in the case of any Lender, its applicable lending office located in, the jurisdiction imposing such Tax (or any political subdivision thereof) or (B) that are Other Connection Taxes, (ii) in the case of a Lender, U.S. federal withholding Taxes imposed on amounts payable to or for the account of such Lender with respect to an applicable interest in a Loan or Term Commitment pursuant to a law in effect on the date on which (A) such Lender acquires such interest in the Loan or Term Commitment or (B) such Lender changes its lending office, except in each case to the extent that, pursuant to Section 2 or Section 4 of this Addendum 1, amounts with respect to such Taxes were payable either to such Lender's assignor immediately before such Lender became a party hereto or to such Lender immediately before it changed its lending office, (iii) Taxes attributable to such Recipient's failure to comply with Section 7 of this Addendum 1 and (iv) any withholding Taxes imposed under FATCA.

c. "**FATCA**" means Sections 1471 through 1474 of the Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof, any agreements entered into pursuant to Section 1471(b)(1) of the Code, and any fiscal or regulatory legislation, rules or practices adopted pursuant to any intergovernmental agreement, treaty or convention among governmental authorities and implementing such Sections of the Code.

d. "**Foreign Lender**" means a Lender that is not a U.S. Person.

e. "**Indemnified Taxes**" means (i) Taxes, other than Excluded Taxes, imposed on or with respect to any payment made by or on account of any obligation of Borrower under any Loan Document and (ii) to the extent not otherwise described in clause (i), Other Taxes.

f. "**Other Connection Taxes**" means, with respect to any Recipient, Taxes imposed as a result of a present or former connection between such Recipient and the jurisdiction imposing such Tax (other than connections arising from such Recipient having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, engaged in any other transaction pursuant to or enforced any Loan Document, or sold or assigned an interest in any Loan or Loan Document).

g. "**Other Taxes**" means all present or future stamp, court or documentary, intangible, recording, filing or similar Taxes that arise from any payment made under, from the execution, delivery, performance, enforcement or registration of, from the receipt or perfection of a security interest under, or otherwise with respect to, any Loan Document, except any such Taxes that are Other Connection Taxes imposed with respect to an assignment.

h. "**Recipient**" means Agent or any Lender, as applicable.

i. "**Withholding Agent**" means Borrower and Agent.

2. **Payments Free of Taxes**. Any and all payments by or on account of any obligation of Borrower under any Loan Document shall be made without deduction or withholding for any Taxes, except as required by applicable law. If any applicable law (as determined in the good faith discretion of an applicable Withholding Agent) requires the deduction or withholding of any Tax from any such payment by a Withholding Agent, then the applicable Withholding Agent shall be entitled to make such deduction or withholding and shall timely pay the full amount deducted or withheld to the relevant governmental authority in accordance with applicable law and, if such Tax is an Indemnified Tax, then the sum payable by Borrower shall be increased as necessary so that after such deduction or withholding has been made (including such deductions and withholdings applicable to additional sums payable under this Section 2 or Section 4 of this Addendum 1) the applicable Recipient receives an amount equal to the sum it would have received had no such deduction or withholding been made.

3. **Payment of Other Taxes by Borrower**. Borrower shall timely pay to the relevant governmental authority in accordance with applicable law, or at the option of Agent timely reimburse it for the payment of, any Other Taxes.

4. **Indemnification by Borrower**. Borrower shall indemnify each Recipient, within 10 days after demand therefor, for the full amount of any Indemnified Taxes (including Indemnified Taxes imposed or asserted on or attributable to amounts payable under Section 2 of this Addendum 1 or this Section 4) payable or paid by such Recipient or required to be withheld or deducted from a payment to such Recipient and any reasonable expenses arising therefrom or with respect thereto, whether or not such Indemnified Taxes were correctly or legally imposed or asserted by the relevant governmental authority. A certificate as to the amount of such payment or liability delivered to Borrower by a Lender (with a copy to Agent), or by Agent on its own behalf or on behalf of a Lender, shall be conclusive absent manifest error. In addition, Borrower agrees to pay, and to save Agent and any Lender harmless from, any and all liabilities with respect to, or resulting from any delay in paying, any and all excise, sales or other similar taxes (excluding taxes imposed on or measured by the net income of Agent or such Lender) that may be payable or determined to be payable with respect to any of the Collateral or this Agreement.

5. **Indemnification by Lenders**. Each Lender shall severally indemnify Agent, within 10 days after demand therefor, for any Indemnified Taxes attributable to such Lender (but only to the extent that Borrower has not already indemnified Agent for such Indemnified Taxes and without limiting the obligation of Borrower to do so), that are payable or paid by Agent in connection with any Loan Document, and any reasonable expenses arising therefrom or with respect thereto, whether or not such Taxes were correctly or legally imposed or asserted by the relevant governmental authority. A certificate as to the amount of such payment or liability delivered to any Lender by Agent shall be conclusive absent manifest error. Each Lender hereby authorizes Agent to set off and apply any

and all amounts at any time owing to such Lender under any Loan Document or otherwise payable by Agent to Lender from any other source against any amount due to Agent under this Section 5.

6. **Evidence of Payments**. As soon as practicable after any payment of Taxes by Borrower to a governmental authority pursuant to the provisions of this Addendum 1, Borrower shall deliver to Agent the original or a certified copy of a receipt issued by such governmental authority evidencing such payment, a copy of the return reporting such payment or other evidence of such payment reasonably satisfactory to Agent.

7. **Status of Lenders**.

a. Any Lender that is entitled to an exemption from or reduction of withholding Tax with respect to payments made under any Loan Document shall deliver to Borrower and Agent, at the time or times reasonably requested by Borrower or Agent, such properly completed and executed documentation reasonably requested by Borrower or Agent as will permit such payments to be made without withholding or at a reduced rate of withholding. In addition, any Lender, if reasonably requested by Borrower or Agent, shall deliver such other documentation prescribed by applicable law or reasonably requested by Borrower or Agent as will enable Borrower or Agent to determine whether or not such Lender is subject to backup withholding or information reporting requirements. Notwithstanding anything to the contrary in the preceding two sentences, the completion, execution and submission of such documentation (other than such documentation set forth in Sections 7(b)(i), 7(b)(ii) and 7(b)(iv) of this Addendum 1) shall not be required if in Lender's reasonable judgment such completion, execution or submission would subject such Lender to any material unreimbursed cost or expense or would materially prejudice the legal or commercial position of such Lender.

a. Without limiting the generality of the foregoing, in the event that Borrower is a U.S. Person,

i. any Lender that is a U.S. Person shall deliver to Borrower and Agent on or prior to the date on which such Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of Borrower or Agent), executed copies of IRS Form W-9 certifying that such Lender is exempt from U.S. federal backup withholding tax;

ii. any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to Borrower and Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of Borrower or Agent), whichever of the following is applicable:

A. in the case of a Foreign Lender claiming the benefits of an income tax treaty to which the United States is a party (x) with respect to payments of interest under any Loan Document, executed copies of IRS Form W-8BEN or IRS Form W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "interest" article of such tax treaty and (y) with respect to any other applicable payments under any Loan Document, IRS Form W-8BEN or IRS Form W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding

Tax pursuant to the "business profits" or "other income" article of such tax treaty;

B. executed copies of IRS Form W-8ECI;

C. in the case of a Foreign Lender claiming the benefits of the exemption for portfolio interest under Section 881(c) of the Code, (x) a certificate substantially in the form of Exhibit H-1 to the effect that such Foreign Lender is not a "bank" within the meaning of Section 881(c)(3)(A) of the Code, a "10 percent shareholder" of Borrower within the meaning of Section 871(h)(3)(B) of the Code, or a "controlled foreign corporation" related to Borrower as described in Section 881(c)(3)(C) of the Code (a "**U.S. Tax Compliance Certificate**") and (y) executed copies of IRS Form W-8BEN or IRS Form W-8BEN-E; or

D. to the extent a Foreign Lender is not the beneficial owner, executed copies of IRS Form W-8IMY, accompanied by IRS Form W-8ECI, IRS Form W-8BEN, IRS Form W-8BEN-E, a U.S. Tax Compliance Certificate substantially in the form of Exhibit H-2 or Exhibit H-3, IRS Form W-9, and/or other certification documents from each beneficial owner, as applicable; provided that if the Foreign Lender is a partnership and one or more direct or indirect partners of such Foreign Lender are claiming the portfolio interest exemption, such Foreign Lender may provide a U.S. Tax Compliance Certificate substantially in the form of Exhibit H-4 on behalf of each such direct and indirect partner;

iii. any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to Borrower and Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of Borrower or Agent), executed copies of any other form prescribed by applicable law as a basis for claiming exemption from or a reduction in U.S. federal withholding Tax, duly completed, together with such supplementary documentation as may be prescribed by applicable law to permit Borrower or Agent to determine the withholding or deduction required to be made; and

iv. if a payment made to a Lender under any Loan Document would be subject to U.S. federal withholding Tax imposed by FATCA if such Lender were to fail to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Code, as applicable), such Lender shall deliver to Borrower and Agent at the time or times prescribed by law and at such time or times reasonably requested by Borrower or Agent such documentation prescribed by applicable law (including as prescribed by Section 1471(b)(3)(C)(i) of the Code) and such additional documentation reasonably requested by Borrower or Agent as may be necessary for Borrower and Agent to comply with their obligations under FATCA and to determine that such Lender has complied with such Lender's obligations under FATCA or to determine the amount, if any, to deduct and withhold from such payment. Solely for purposes of this clause (iv), "FATCA" shall include any amendments made to FATCA after the date of this Agreement.

b. Each Lender agrees that if any form or certification it previously delivered expires or becomes obsolete or inaccurate in any respect, it shall update such form or certification or promptly notify Borrower and Agent in writing of its legal inability to do so.

8. **Treatment of Certain Refunds**. If any party determines, in its sole discretion exercised in good faith, that it has received a refund of any Taxes as to which it has been indemnified pursuant to the provisions of this Addendum 1 (including by the payment of additional amounts pursuant to the provisions of this Addendum 1), it shall pay to the indemnifying party an amount equal to such refund (but only to the extent of indemnity payments made under the provisions of this Addendum 1 with respect to the Taxes giving rise to such refund), net of all out-of-pocket expenses (including Taxes) of such indemnified party and without interest (other than any interest paid by the relevant governmental authority with respect to such refund). Such indemnifying party, upon the request of such indemnified party, shall repay to such indemnified party the amount paid over pursuant to this Section 8 (plus any penalties, interest or other charges imposed by the relevant governmental authority) in the event that such indemnified party is required to repay such refund to such governmental authority. Notwithstanding anything to the contrary in this Section 8, in no event will the indemnified party be required to pay any amount to an indemnifying party pursuant to this Section 8 the payment of which would place the indemnified party in a less favorable net after-Tax position than the indemnified party would have been in if the Tax subject to indemnification and giving rise to such refund had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts with respect to such Tax had never been paid. This Section 8 shall not be construed to require any indemnified party to make available its Tax returns (or any other information relating to its Taxes that it deems confidential) to the indemnifying party or any other Person.

9. **Increased Costs**. If any change in applicable law shall subject any Recipient to any Taxes (other than (A) Indemnified Taxes, (B) Taxes described in clauses (ii) through (iv) of the definition of Excluded Taxes and (C) Connection Income Taxes) on its loans, loan principal, commitments, or other obligations, or its deposits, reserves, other liabilities or capital attributable thereto, and the result shall be to increase the cost to such Recipient of making, converting to, continuing or maintaining any Term Loan Advance or of maintaining its obligation to make any such Loan, or to reduce the amount of any sum received or receivable by such Recipient (whether of principal, interest or any other amount), then, upon the request of such Recipient, Borrower will pay to such Recipient such additional amount or amounts as will compensate such Recipient for such additional costs incurred or reduction suffered.

10. **Survival**. Each party's obligations under the provisions of this Addendum 1 shall survive the resignation or replacement of Agent or any assignment of rights by, or the replacement of, a Lender, the termination of the Term Commitments and the repayment, satisfaction or discharge of all obligations under any Loan Document.

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

ADDENDUM 2 to LOAN AND SECURITY AGREEMENT

1. **Borrower's Business**. For purposes of this Addendum 2, Borrower shall be deemed to include its "affiliates" as defined in Title 13 Code of Federal Regulations Section 121.103. Borrower represents and warrants to Agent and Lenders as of the SBA Funding Date and covenants to Agent and Lenders for a period of one year after the SBA Funding Date or for such longer period as set forth below with respect to subsections 1.2, 1.3, 1.4, 1.5, 1.6 and 1.7 below, as follows:

   a. Size Status. Borrower's primary NAICS code is 541714 and has less than 250 employees in the aggregate;

   a. No Relender. Borrower's primary business activity does not involve, directly or indirectly, providing funds to others, purchasing debt obligations, factoring, or long-term leasing of equipment with no provision for maintenance or repair;

   b. No Passive Business. Borrower is engaged in a regular and continuous business operation (excluding the mere receipt of payments such as dividends, rents, lease payments, or royalties). Borrower's employees are carrying on the majority of day to day operations. Borrower will not pass through substantially all of the proceeds of the Loan to another entity;

   c. No Real Estate Business. Borrower is not classified under North American Industry Classification System (NAICS) codes 531110 (lessors of residential buildings and dwellings), 531120 (lessors of nonresidential buildings except miniwarehouses), 531190 (lessors of other real estate property), 237210 (land subdivision), or 236117 (new housing for-sale builders). Borrower is not classified under NAICS codes 236118 (residential remodelers), 236210 (industrial building construction), or 236220 (commercial and institutional building construction), if Borrower is primarily engaged in construction or renovation of properties on its own account rather than as a hired contractor. Borrower is not classified under NAICS codes 531210 (offices of real estate agents and brokers), 531311 (residential property managers), 531312 (nonresidential property managers), 531320 (offices of real estate appraisers), or 531390 (other activities related to real estate), unless it derives at least 80 percent of its revenue from non-Affiliate sources. The proceeds of the Loan will not be used to acquire or refinance real property unless Borrower (x) is acquiring an existing property and will use at least 51 percent of the usable square footage for its business purposes; (y) is building or renovating a building and will use at least 67 percent of the usable square footage for its business purposes; or (z) occupies the subject property and uses at least 67 percent of the usable square footage for its business purposes.

   d. No Project Finance. Borrower's assets are not intended to be reduced or consumed, generally without replacement, as the life of its business progresses, and the nature of Borrower's business does not require that a stream of cash payments be made to the business's financing sources, on a basis associated with the continuing sale of assets (e.g., real estate development projects and oil and gas wells). The primary purpose of the Loan is not to fund production of a single item or defined limited number of items, generally over a defined production period, where such production will constitute the majority of the activities of Borrower (e.g., motion pictures and electric generating plants).

e. No Farm Land Purchases. Borrower will not use the proceeds of the Loan to acquire farm land which is or is intended to be used for agricultural or forestry purposes, such as the production of food, fiber, or wood, or is so taxed or zoned.

f. No Foreign Investment. The proceeds of the Loan will not be used substantially for a foreign operation. Borrower will not have, on or within one year after the SBA Funding Date and each other Loan provided by a Lender that is an SBIC more than 49 percent of its employees or tangible assets located outside the United States of America.

11. **Small Business Administration Documentation**. Agent and Lenders acknowledge that Borrower completed, executed and delivered to Agent prior to the SBA Funding Date SBA Forms 480, 652 and 1031 (Parts A and B) together with a business plan showing Borrower's financial projections (including balance sheets and income and cash flows statements) for the period described therein and a written statement (whether included in the purchase agreement or pursuant to a separate statement) from Agent regarding its intended use of proceeds from the sale of securities to Lenders (the "Use of Proceeds Statement"). Borrower represents and warrants to Agent and Lenders that the information regarding Borrower and its affiliates set forth in the SBA Form 480, Form 652 and Form 1031 and the Use of Proceeds Statement delivered as of the SBA Funding Date is accurate and complete.

12. **Inspection**. The following covenants contained in this Section 3 are intended to supplement and not to restrict the related provisions of the Loan Documents. Subject to the preceding sentence, Borrower will permit, for so long as Lenders hold any debt or equity securities of Borrower, Agent, Lenders or their representative, at Agent's or Lenders' expense, and examiners of the SBA to visit and inspect the properties and assets of Borrower, to examine its books of account and records, and to discuss Borrower's affairs, finances and accounts with Borrower's officers, senior management and accountants, all at such reasonable times as may be requested by Agent or Lenders or the SBA.

13. **Annual Assessment**. Upon request of Agent or Lender, promptly after the end of each calendar year (but in any event prior to February 28 of each year) and at such other times as may be reasonably requested by Agent or Lenders, Borrower will deliver to Agent a written assessment of the economic impact of Lenders' investment in Borrower, specifying the full-time equivalent jobs created or retained in connection with the investment, the impact of the investment on the businesses of Borrower in terms of expanded revenue and taxes, other economic benefits resulting from the investment (such as technology development or commercialization, minority business development, or expansion of exports) and such other information as may be required regarding Borrower in connection with the filing of Lenders' SBA Form 468. Lenders will assist Borrower with preparing such assessment. In addition to any other rights granted hereunder, Borrower will grant Agent and Lenders and the SBA access to Borrower's books and records for the purpose of verifying the use of such proceeds. Borrower also will furnish or cause to be furnished to Agent and Lenders such other information regarding the business, affairs and condition of Borrower as Agent or Lenders may from time to time reasonably request, and such information shall be certified by the President, Chief Executive Officer or Chief Financial Officer of Borrower to the extent requested by Agent or Lender for compliance with the SBIC Act.

14. **Use of Proceeds**. Borrower will use the proceeds from the Loan only for purposes set forth in Section 7.17. Borrower will deliver to Agent from time to time promptly following Agent's request, a written report, certified as correct by Borrower's Chief Financial Officer, verifying the purposes and amounts for which proceeds from the Loan have been disbursed. Borrower will supply to Agent such additional information and documents as Agent reasonably requests with respect to its use of

proceeds and will, to the extent required by Section 7.2, permit Agent and Lenders and the SBA to have access to any and all Borrower records and information and personnel as Agent deems necessary to verify how such proceeds have been or are being used, and to assure that the proceeds have been used for the purposes specified in Section 7.17.

15. **Activities and Proceeds**. Neither Borrower nor any of its affiliates (if any) will engage in any activities or use directly or indirectly the proceeds from the Loan for any purpose for which a small business investment company is prohibited from providing funds by the SBIC Act, including 13 C.F.R. §107.720. Borrower shall not, nor shall it cause or permit any of its subsidiaries to, without obtaining the prior written approval of Agent, change Borrower's or any such subsidiary's business activities from that conducted on the date hereof to a business activity from which a small business investment company is prohibited from providing funds by the SBIC Act. Borrower agrees that any such change in its or any such subsidiary's business activities without such prior written consent of Agent shall constitute a material breach of the obligations of Borrower under this Addendum 1.

16. **Redemption Provisions**. Notwithstanding any provision to the contrary contained in the Certificate of Incorporation of Borrower, as amended from time to time (the "Charter"), if, pursuant to the redemption provisions contained in the Charter, Lenders are entitled to a redemption of any warrant issued by Borrower, such redemption (in the case of Lenders) will be at a price equal to the redemption price set forth in the Charter (the "Existing Redemption Price"). If, however, Lenders deliver written notice to Borrower that the then current regulations promulgated under the SBIC Act prohibit payment of the Existing Redemption Price in the case of an SBIC (or, if applied, the Existing Redemption Price would cause any series of preferred stock to lose its classification as an "equity security" and Lenders have determined that such classification is unadvisable), the amount Lenders will be entitled to receive shall be the greater of (i) fair market value of the securities being redeemed taking into account the rights and preferences of such securities plus any costs and expenses of Lenders incurred in making or maintaining such warrant, and (ii) the Existing Redemption Price where the amount of accrued but unpaid dividends payable to Lenders is limited to Borrower's earnings plus any costs and expenses of Lenders incurred in making or maintaining such warrant; provided, however, the amount calculated in subsections (i) or (ii) above shall not exceed the Existing Redemption Price.

17. **Compliance and Resolution**. Borrower agrees that a failure to comply with Borrower's obligations under this Addendum, or any other set of facts or circumstances where it has been asserted by any governmental regulatory agency (or Agent or Lenders believe that there is a substantial risk of such assertion) that Agent, Lenders and their affiliates are not entitled to hold, or exercise any significant right with respect to, any securities issued to Lenders by Borrower, will constitute a breach of the obligations of Borrower under the financing agreements among Borrower, Agent and Lenders. In the event of (i) a failure to comply with Borrower's obligations under this Addendum; or (ii) an assertion by any governmental regulatory agency (or Agent or Lenders believe that there is a substantial risk of such assertion) of a failure to comply with Borrower's obligations under this Addendum, then (y) Agent, Lenders and Borrower will meet and resolve any such issue in good faith to the satisfaction of Borrower, Agent, Lenders, and any governmental regulatory agency, and (z) upon request of Lenders or Agent, Borrower will cooperate and assist with any assignment of the financing agreements among any Lender and Hercules Capital, Inc.

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

ADDENDUM 3 to LOAN AND SECURITY AGREEMENT

Agent and Lender Terms

(a) Each Lender hereby irrevocably appoints Hercules Capital, Inc. to act on its behalf as the Agent hereunder and under the other Loan Documents and irrevocably authorizes the Agent to take such actions on its behalf and to exercise such powers as are delegated to the Agent by the terms hereof or thereof, together with such actions and powers as are reasonably incidental thereto. Agent shall have only those duties which are specified in this Agreement and it may perform such duties by or through its agents, representatives or employees. In performing its duties on behalf of Lenders, Agent shall exercise the same care which it would exercise in dealing with loans made for its own account, but it shall not be responsible to any Lender for the execution, effectiveness, genuineness, validity, enforceability, collectability or sufficiency of all or any of the Loan Documents, or for any representations, warranties, recitals or statements made therein or made in any written or oral statement or in any financial or other statements, instruments, reports, certificates or any other documents furnished or delivered in connection herewith or therewith by Agent to any Lender or by or on behalf of Borrower to Agent or any Lender, or be required to ascertain or inquire as to the performance or observance of any of the terms, conditions, provisions, covenants or agreements contained herein or therein, as to the use of the proceeds of the Term Loan Advances, the contents of any certificate, report or other document delivered hereunder or thereunder or in connection herewith or therewith, the validity, enforceability, effectiveness or genuineness of this Agreement, any other Loan Document or any other agreement, instrument or document or the satisfaction of any condition set forth in Section 4 or elsewhere herein, other than to confirm receipt of items expressly required to be delivered to the Agent. Agent shall not be responsible for insuring the Collateral or for the payment of any taxes, assessments, charges or any other charges or liens of any nature whatsoever upon the Collateral or otherwise for the maintenance of the Collateral, except in the event Agent enters into possession of a part or all of the Collateral, in which event Agent shall preserve the part in its possession. Unless the officers of Agent acting in their capacity as officer of Agent on Borrower's account have actual knowledge thereof or have been notified in writing thereof by Lenders, Agent shall not be required to ascertain or inquire as to the existence or possible existence of any Event of Default.

(a) Neither Agent nor any of its officers, directors, employees, attorneys, representatives or agents shall be liable to Lenders for any action taken or omitted hereunder or under any of the other Loan Documents or in connection herewith or therewith unless caused by its or their gross negligence or willful misconduct. No provision of this Agreement or of any other Loan Document shall be deemed to impose any duty or obligation on Agent to perform any act or to exercise any power in any jurisdiction in which it shall be illegal, or shall be deemed to impose any duty or obligation on Agent to perform any act or exercise any right or power if such performance or exercise (a) would subject Agent to a tax in a jurisdiction where it is not then subject to a tax or (b) would require Agent to qualify to do business in any jurisdiction where it is not so qualified. Without prejudice to the generality of the foregoing, no Lender shall have any right of action whatsoever against Agent as a result of Agent acting or (where so instructed) refraining from acting under this Agreement or under any of the other Loan Documents in accordance with the instructions of the Lenders. Agent shall be entitled to refrain from exercising any power, discretion or authority vested in it under this Agreement unless and until it has obtained the written instructions of the Lenders. The agency hereby created shall in no way impair or affect any of the rights and powers of, or impose any duties or obligations upon Agent in its individual capacity. With respect to its participation in the Loan Agreement hereunder, Agent shall have the same rights and powers hereunder as any other Lender and may exercise the same rights and powers as though it were not performing the duties and functions delegated to it hereunder and the term "Lender" or "Lenders" or any similar term shall unless the context clearly indicates otherwise include Agent in its individual capacity.

(b) Agent may rely, and shall be fully protected in acting, or refraining to act, upon, any resolution, statement, certificate, instrument, opinion, report, notice, request, consent, order, bond or other paper or document that it has no reason to believe to be other than genuine and to have been signed or presented by the proper party or parties or, in the case of cables, telecopies and telexes, to have been sent by the proper party or parties. In the absence of its gross negligence or willful misconduct, Agent may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon any certificates or opinions furnished to Agent and conforming to the requirements of this Agreement or any of the other Loan Documents. Agent may consult with counsel, and any opinion or legal advice of such counsel shall be full and complete authorization and protection in respect of any action taken, not taken or suffered by Agent hereunder or under any Loan Documents in accordance therewith. Agent shall have the right at any time to seek instructions concerning the administration of the Collateral from any court of competent jurisdiction. Agent shall not be under any obligation to exercise any of the rights or powers granted to Agent by this Agreement and the other Loan Documents at the request or direction of the Lenders unless Agent shall have been provided by the Lenders with adequate security and indemnity against the costs, expenses and liabilities that may be incurred by it in compliance with such request or direction.

(c) Each Lender agrees to indemnify the Agent in its capacity as such (to the extent not reimbursed by Borrower and without limiting the obligation of Borrower to do so), according to its respective Term Commitment percentages (based upon the total outstanding Term Commitments) in effect on the date on which indemnification is sought under this Addendum 3, from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind whatsoever that may at any time be imposed on, incurred by or asserted against the Agent in any way relating to or arising out of, this Agreement, any of the other Loan Documents or any documents contemplated by or referred to herein or therein or the transactions contemplated hereby or thereby or any action taken or omitted by the Agent under or in connection with any of the foregoing. The agreements in this Section shall survive the payment of the Loans and all other amounts payable hereunder.

(d) To the extent not reimbursed either by Borrower or from the application of Collateral proceeds pursuant to Section 10.2, a Lender (the "Indemnified Lender") shall be indemnified by the other Lender (an "Indemnifying Lender"), on a several basis in proportion to each Lender's pro rata portion of the Term Commitment, and each Indemnifying Lender agrees to reimburse the Indemnified Lender for the Indemnifying Lender's pro rata share of the following items (an "Indemnified Payment"):

(i) all reasonable out-of-pocket costs and expenses of the Indemnified Lender incurred by the Indemnified Lender in connection with the discharge of its activities under this Agreement or the Loan Agreement, including reasonable legal expenses and attorneys' fees; provided, that the Indemnified Lender shall consult with the other Lender regarding the incurrence of such costs and expenses at reasonable intervals (but not more often than monthly) and any such reasonable costs and expenses shall be "Claims" hereunder notwithstanding any disagreement by the other Lender as to their incurrence; and

(ii) from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind or nature whatsoever, which may be imposed on, incurred by or asserted against the Indemnified Lender in any way relating to or arising out of this Agreement, or any action taken or omitted by the Indemnified Lender hereunder; provided that the Indemnifying Lender shall not be liable for any portion of such liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements, if the same results from the Indemnified Lender's gross negligence or willful misconduct or from undertaking Enforcement Actions in violation of clause (d) of Addendum 5;

(iii) provided, however, that the Indemnified Lender shall not be reimbursed or indemnified for an Indemnified Payment, except to the extent that the Indemnified Lender paid more than its ratable share of such payment. All Indemnified Payments (as set forth in this paragraph c) to an Indemnified Lender are intended to be paid ratably by the other Lender.

(e) Agent in Its Individual Capacity. The Person serving as the Agent hereunder shall have the same rights and powers in its capacity as a Lender as any other Lender and may exercise the same as though it were not the Agent and the term "Lender" shall, unless otherwise expressly indicated or unless the context otherwise requires, include each such Person serving as Agent hereunder in its individual capacity.

(f) Exculpatory Provisions. The Agent shall have no duties or obligations except those expressly set forth herein and in the other Loan Documents. Without limiting the generality of the foregoing, the Agent shall not:

(i) be subject to any fiduciary or other implied duties, regardless of whether any default or any Event of Default has occurred and is continuing;

(iv) have any duty to take any discretionary action or exercise any discretionary powers, except discretionary rights and powers expressly contemplated hereby or by the other Loan Documents that the Agent is required to exercise as directed in writing by the Lenders, provided that the Agent shall not be required to take any action that, in its opinion or the opinion of its counsel, may expose the Agent to liability or that is contrary to any Loan Document or applicable law; and

(v) except as expressly set forth herein and in the other Loan Documents, have any duty to disclose, and the Agent shall not be liable for the failure to disclose, any information relating to the Borrower or any of its Affiliates that is communicated to or obtained by any Person serving as the Agent or any of its Affiliates in any capacity.

(g) In connection with any exercise of Enforcement Actions hereunder, neither any Agent nor any Lender or any of its partners, or any of their respective directors, officers, employees, attorneys, accountants, or agents shall be liable as such for any action taken or omitted by it or them, except for its or their own gross negligence or willful misconduct with respect to its duties under this Agreement.

(h) Each Lender and Agent may execute any of its powers and perform any duties hereunder either directly or by or through agents or attorneys-in-fact. Each Lender and Agent shall be entitled to advice of counsel concerning all matters pertaining to such powers and duties. No Lender or Agent shall be responsible for the negligence or misconduct of any agents or attorneys-in-fact selected by it, if the selection of such agents or attorneys-in-fact was done without gross negligence or willful misconduct.

(i) Each Lender agrees that it will make its own independent investigation of the financial condition and affairs of Borrower in connection with the making of Term Loan Advances pursuant to the Loan Agreement and has made and shall continue to make its own appraisal of the creditworthiness of Borrower. Neither the Agent nor any Lender shall have any duty or responsibility either initially or on a continuing basis to make any such investigation or any such appraisal on behalf of all Lenders or to provide the other Lenders with any credit or other information with respect thereto whether coming into its possession before the date hereof or any time or times thereafter and shall further have no responsibility with respect to the accuracy of or the completeness of the information provided to the Lenders by Borrower.

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

ADDENDUM 4 to LOAN AND SECURITY AGREEMENT

Multiple Borrower Terms

(a) *Borrower's Agent*. Each of Borrowers hereby irrevocably appoints Gritstone bio, Inc. as its agent, attorney-in-fact and legal representative for all purposes, including requesting disbursement of the Loan and receiving account statements and other notices and communications to Borrowers (or any of them) from Agent or any Lender. Agent may rely, and shall be fully protected in relying, on any request for the Term Loan Advances, disbursement instruction, report, information or any other notice or communication made or given by Gritstone bio, Inc., whether in its own name or on behalf of one or more of the other Borrowers, and Agent shall not have any obligation to make any inquiry or request any confirmation from or on behalf of any other Borrower as to the binding effect on it of any such request, instruction, report, information, other notice or communication, nor shall the joint and several character of Borrowers' obligations hereunder be affected thereby.

(b) *Waivers*. Each Borrower hereby waives: (i) any right to require Agent to institute suit against, or to exhaust its rights and remedies against, any other Borrower or any other person, or to proceed against any property of any kind which secures all or any part of the Secured Obligations, or to exercise any right of offset or other right with respect to any reserves, credits or deposit accounts held by or maintained with Agent or any Indebtedness of Agent or any Lender to any other Borrower, or to exercise any other right or power, or pursue any other remedy Agent or any Lender may have; (ii) any defense arising by reason of any disability or other defense of any other Borrower or any guarantor or any endorser, co-maker or other person, or by reason of the cessation from any cause whatsoever of any liability of any other Borrower or any guarantor or any endorser, co-maker or other person, with respect to all or any part of the Secured Obligations, or by reason of any act or omission of Agent or others which directly or indirectly results in the discharge or release of any other Borrower or any guarantor or any other person or any Secured Obligations or any security therefor, whether by operation of law or otherwise; (iii) any defense arising by reason of any failure of Agent to obtain, perfect, maintain or keep in force any Lien on, any property of any Borrower or any other person; (iv) any defense based upon or arising out of any bankruptcy, insolvency, reorganization, arrangement, readjustment of debt, liquidation or dissolution proceeding commenced by or against any other Borrower or any guarantor or any endorser, co-maker or other person, including without limitation any discharge of, or bar against collecting, any of the Secured Obligations (including without limitation any interest thereon), in or as a result of any such proceeding. Until all of the Secured Obligations have been paid, performed, and discharged in full, nothing shall discharge or satisfy the liability of any Borrower hereunder except the full performance and payment of all of the Secured Obligations. If any claim is ever made upon Agent for repayment or recovery of any amount or amounts received by Agent in payment of or on account of any of the Secured Obligations, because of any claim that any such payment constituted a preferential transfer or fraudulent conveyance, or for any other reason whatsoever, and Agent repays all or part of said amount by reason of any judgment, decree or order of any court or administrative body having jurisdiction over Agent or any of its property, or by reason of any settlement or compromise of any such claim effected by Agent with any such claimant (including without limitation the any other Borrower), then and in any such event, each Borrower agrees that any such judgment, decree, order, settlement and compromise shall be binding upon such Borrower, notwithstanding any revocation or release of this Agreement or the cancellation of any note or other instrument evidencing any of the Secured Obligations, or any release of any of the Secured Obligations, and each Borrower shall be and remain liable to Agent and Lenders under this Agreement for the amount so repaid or recovered, to the same extent as if such amount had never originally been received by Agent or any Lender, and the provisions of this sentence shall survive, and continue in effect, notwithstanding any revocation or release of this Agreement. Each Borrower hereby expressly and unconditionally waives all rights of subrogation, reimbursement and indemnity of every kind against any other Borrower, and all rights of recourse to any

assets or property of any other Borrower, and all rights to any collateral or security held for the payment and performance of any Secured Obligations, including (but not limited to) any of the foregoing rights which Borrower may have under any present or future document or agreement with any other Borrower or other person, and including (but not limited to) any of the foregoing rights which any Borrower may have under any equitable doctrine of subrogation, implied contract, or unjust enrichment, or any other equitable or legal doctrine.

(c) *Consents*. Each Borrower hereby consents and agrees that, without notice to or by Borrower and without affecting or impairing in any way the obligations or liability of Borrower hereunder, Agent may, from time to time before or after revocation of this Agreement, do any one or more of the following in its sole and absolute discretion: (i) accept partial payments of, compromise or settle, renew, extend the time for the payment, discharge, or performance of, refuse to enforce, and release all or any parties to, any or all of the Secured Obligations; (ii) grant any other indulgence to any Borrower or any other Person in respect of any or all of the Secured Obligations or any other matter; (iii) accept, release, waive, surrender, enforce, exchange, modify, impair, or extend the time for the performance, discharge, or payment of, any and all property of any kind securing any or all of the Secured Obligations or any guaranty of any or all of the Secured Obligations, or on which Agent at any time may have a Lien, or refuse to enforce its rights or make any compromise or settlement or agreement therefor in respect of any or all of such property; (iv) substitute or add, or take any action or omit to take any action which results in the release of, any one or more other Borrowers or any endorsers or guarantors of all or any part of the Secured Obligations, including, without limitation one or more parties to this Agreement, regardless of any destruction or impairment of any right of contribution or other right of Borrower; (v) apply any sums received from any other Borrower, any guarantor, endorser, or co-signer, or from the disposition of any Collateral or security, to any Indebtedness whatsoever owing from such person or secured by such Collateral or security, in such manner and order as Agent determines in its sole discretion, and regardless of whether such Indebtedness is part of the Secured Obligations, is secured, or is due and payable. Each Borrower consents and agrees that Agent shall be under no obligation to marshal any assets in favor of Borrower, or against or in payment of any or all of the Secured Obligations. Each Borrower further consents and agrees that Agent shall have no duties or responsibilities whatsoever with respect to any property securing any or all of the Secured Obligations. Without limiting the generality of the foregoing, Agent shall have no obligation to monitor, verify, audit, examine, or obtain or maintain any insurance with respect to, any property securing any or all of the Secured Obligations.

(d) *Independent Liability*. Each Borrower hereby agrees that one or more successive or concurrent actions may be brought hereon against such Borrower, in the same action in which any other Borrower may be sued or in separate actions, as often as deemed advisable by Agent. Each Borrower is fully aware of the financial condition of each other Borrower and is executing and delivering this Agreement based solely upon its own independent investigation of all matters pertinent hereto, and such Borrower is not relying in any manner upon any representation or statement of Agent or any Lender with respect thereto. Each Borrower represents and warrants that it is in a position to obtain, and each Borrower hereby assumes full responsibility for obtaining, any additional information concerning any other Borrower's financial condition and any other matter pertinent hereto as such Borrower may desire, and such Borrower is not relying upon or expecting Agent to furnish to it any information now or hereafter in Agent's possession concerning the same or any other matter.

(e) *Subordination*. All Indebtedness of a Borrower now or hereafter arising held by another Borrower is subordinated to the Secured Obligations and Borrower holding the Indebtedness shall take all actions reasonably requested by Agent to effect, to enforce and to give notice of such subordination.

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

ADDENDUM 5 to LOAN AND SECURITY AGREEMENT

Intercreditor Provisions

(a) *Limitation of Further Credit Extensions*. After the date hereof, except pursuant to this Agreement and as permitted pursuant, no Lender may make loans to or otherwise extend credit to Borrower (excluding the provision by SVB to Borrower of the Bank Services in an aggregate amount outstanding at any time not to exceed the Bank Services Cap) without notice to and the consent of each other Lender, which consent will not be unreasonably withheld.

(f) *Transfer of Interests*.

(i) No Lender may sell or otherwise transfer any of its interest in this Agreement or the related Loan Documents without the prior written consent of the other Lenders (which consent may, for the avoidance of doubt, be conditioned on such successor or assign entering into an intercreditor agreement satisfactory to such other Lender), except that no such consent shall be required in connection with (a) any sale, assignment or transfer by any Lender of any of its interest in this Agreement and other Loan Documents to any Affiliate of such Lender or (b) a Lender's own financing or securitization transactions, in which case, such Lender may assign, transfer or indorse its rights hereunder and under the other Loan Documents to any Person or party providing such financing or formed to undertake such securitization transaction and any transferee of such Person or party upon the occurrence of a default, event of default or similar occurrence with respect to such financing or securitization transaction; provided that no such assignment, transfer or indorsement under this clause (b) shall release such Lender from any of its obligations under this Agreement or under the Loan Documents or substitute any such Person or party for such Lender as a party hereto until Agent shall have received and accepted an effective assignment agreement from such Person or party in form satisfactory to Agent executed, delivered and fully completed by the applicable parties thereto, and shall have received such other information regarding such Person or party as Agent reasonably shall require.

(ii) The transferee shall assume all obligations of the transferring Lender under this Agreement and the other Loan Documents with respect to the portion of the transferor's interest in this Agreement and the other Loan Document transferred, provided, that to the extent the transferor shall not transfer the entirety and shall retain any portion of its interest in this Agreement and the other Loan Documents, the transferor shall retain its obligations under this Agreement and the other Loan Documents with respect to that portion of its interest.

(iii) The transferee shall provide to the other Lender evidence reasonably satisfactory to such Lender that the proposed transferee has the financial ability and legal authority to assume and perform all obligations of the transferring Lender under this Agreement and the other applicable Loan Documents.

(iv) Any sale or transfer of an interest in this Agreement and other applicable Loan Documents shall be voidable at the option of the other Lender unless the provisions of this paragraph (b) are satisfied.

(g) *Possession of Collateral*. If any Lender shall obtain possession of any Collateral, it shall hold such Collateral for itself and as agent and bailee for the other Lenders for purposes of perfecting Agent's or such other Lenders' security interest therein.

(h) *Decision to Exercise Remedies*. Upon the occurrence of an Event of Default, Agent shall take such actions and only such actions as Lenders mutually agree to take to enforce their rights and remedies under this Agreement; provided, however, that if after consultation, Lenders cannot mutually agree on what action to take, then either Lender shall have the right upon prior written notice to the other to cause the acceleration of this Agreement on behalf of the Lenders. Upon such acceleration, the Lenders shall mutually agree as to what Enforcement Action to take; provided, however, that if after consultation, Lenders cannot mutually agree on what action to take, then the Lender wishing to take the stronger Enforcement Action (the "Enforcing Lender") shall have the right to determine and shall control the timing, order and type of Enforcement Actions which will be taken and all other matters in connection with any such Enforcement Actions. To facilitate these rights to control Enforcement Actions, upon either Lender becoming the Enforcing Lender, if the Enforcing Lender is not already the Agent, then automatically and without the necessity of any further action being taken by any party, (x) the original Agent shall be deemed to have resigned as Agent and (y) the Lenders shall be deemed to have unanimously appointed the Enforcing Lender as successor Agent under this Agreement and the Loan Documents (and the Enforcing Lender shall be deemed to have accepted such appointment), provided that, once the Enforcing Lender shall have been appointed as the Agent under the provisions of this sentence, the Enforcing Lender as such successor Agent shall no longer be bound by the restrictions of the first sentence of this paragraph, but instead shall have the right to determine and control all Enforcement Actions as provided for in the immediately preceding sentence (subject to the provisions of the following sentence). In taking such Enforcement Actions pursuant to the previous sentence, the Enforcing Lender as such successor Agent shall act reasonably and in good faith and shall consult with and keep the other Lender informed thereof at reasonable intervals; provided, however, that notwithstanding any such consultations and provision of information to the other Lender, the Enforcing Lender as such successor Agent shall retain the right to make all determinations in the event of disagreements between the Enforcing Lender and the other Lender. In all cases with respect to Enforcement Actions, the Enforcing Lender shall have the right to act both on its own behalf and as agent for the other Lender with respect thereto. In addition, the other Lender shall take such actions and execute such documents and instruments as the Enforcing Lender may reasonably request in connection with and to facilitate any such Enforcement Actions and take any other action as the successor Agent requests to perfect or continue Agent's Lien in the Collateral or to effect the purposes of this Agreement and the Loan Documents.

(i) *Insolvency Events*. In the event of any distribution, division, or application, partial or complete, voluntary or involuntary, by operation of law or otherwise, of all or any part of the property of Borrower or the proceeds thereof to the creditors of Borrower, or the readjustment of any Collateral Claims, whether by reason of liquidation, bankruptcy, arrangement, receivership, assignment for the benefit of creditors or any other action or proceeding involving the readjustment of all or any part of any of the Collateral Claims, or the application of the property of Borrower to the payment or liquidation thereof, or upon the dissolution or other winding up of Borrower's business, or upon the sale of all or any substantial part of Borrower's property (any of the foregoing being hereinafter referred to as an "Insolvency Event"), then, and in any such event, and subject to any subordination arrangements to which the Lenders may be subject, (a) all payments and distributions of any kind or character, whether in cash or property or securities in respect of the Lenders' Collateral Claims shall be distributed pursuant to the provisions of Section 10.2 of this Agreement; (b) each Lender shall promptly file a claim or claims, on the form required in such proceeding, for the full outstanding amount of such Lender's Claim, and shall use its best efforts to cause said claim or claims to be approved; (c) each of the Lenders hereby irrevocably agrees that, to the extent that it fails timely to do so, any other Lender may in the name of the first Lender, or otherwise, prove up any and all Collateral Claims of the first Lender relating to the first Lender's Claim; and (d) in the event that, notwithstanding the foregoing, any payment or distribution of any kind or character (other than any payment received by SVB in respect of Bank Services) in respect of a Lender's Collateral Claims, whether in cash, properties or securities, shall be received by a Lender in excess of its ratable share, then the portion

of such payment or distribution in excess of such Lender's ratable share shall be received by such Lender in trust for and shall be promptly paid over to the other Lender for application to the payments of amounts due on the other Lender's Collateral Claims.

(j) *Foreclosure*.

(i) Only by mutual agreement shall the Lenders make or cause to be made a credit bid at any foreclosure sale or other sale of any of the Collateral on behalf of the Lenders. If Lenders are the successful bidders at the sale, then (a) the amount to be credited against their respective Collateral Claims shall be allocated pro rata between the Lenders according to the balances of such Collateral Claims, and (b) Lenders shall take title to the Collateral so purchased together, each holding a pro rata undivided interest in such Collateral. The parties shall mutually agree as to the most favorable disposition of any Collateral purchased with any such credit bid.

(ii) No Lender shall make or cause to be made a cash bid at any foreclosure sale or other sale of any of the Collateral without the prior written consent of the other Lender. If a cash bid is made and is successful, then (a) the proceeds of the sale shall be allocated as set forth in Section 10.2 of this Agreement, and (b) the Lender that entered the successful bid shall acquire the Collateral so purchased for its own account, and the other Lender shall have no further interest in that Collateral upon the payment to such other Lender of the shares of the proceeds in accordance with Section 10.2 of this Agreement.

(k) *Relationship of Lenders*. The relationship among the Lenders is, and at all times shall remain solely that of co-lenders. Lenders shall not under any circumstances be construed to be partners or joint venturers of one another; nor shall the Lenders under any circumstances be deemed to be in a relationship of confidence or trust or a fiduciary relationship with one another, or to owe any fiduciary duty to one another. Lenders do not undertake or assume any responsibility or duty to one another to select, review, inspect, supervise, pass judgment upon or otherwise inform each other of any matter in connection with Borrower's property, any Collateral held by any Lender or the operations of Borrower. Each Lender shall rely entirely on its own judgment with respect to such matters, and any review, inspection, supervision, exercise of judgment or supply of information undertaken or assumed by any Lender in connection with such matters is solely for the protection of such Lender.

(l) *Waterfall*. Notwithstanding anything in this Agreement to the contrary, the priorities set forth in Section 10.2 shall not apply to any and/or all of SVB's present and future rights (whether described as rights of setoff, banker's liens, chargeback or otherwise, and whether available to SVB under the law or under any other agreement between SVB and Borrower concerning any account maintained by Borrower with SVB or any of its affiliates ("Account")) with respect to: (i) the face amount of a check, draft, money order, instrument, wire transfer of funds, automated clearing house entry, credit from a merchant card transaction, other electronic transfer of funds or other item (x) deposited in or credited to any Account and returned unpaid or otherwise uncollected or subject to an adjustment entry, whether for insufficient funds or for any other reason and without regard to the timeliness of the return or adjustment or the occurrence or timeliness of any other person's notice of nonpayment or adjustment, (y) subject to a claim against SVB for breach of transfer, presentment, encoding, retention or other warranty under Federal Reserve Regulations or Operating Circulars, clearing house rules, the UCC or other applicable law, or (z) for a merchant card transaction, against which a contractual demand for chargeback has been made; (ii) service charges, fees or expenses payable or reimbursable SVB in connection with any Account or any related services; and (iii) any adjustments or corrections of any posting or encoding errors, for which SVB shall be senior to each other Lender.

(m) *Priority of Bank Services; Cash Collateral*. The parties agree that (x) notwithstanding anything to the contrary contained in this Agreement, SVB's lien on the Collateral shall be senior in priority to the liens of Lenders under the Loan Agreement to the extent of Borrower's reimbursement obligations in respect of Bank Services up to the Bank Services Cap (collectively, the "Reimbursement Obligations"), and (y) SVB may extend credit to Borrower in connection with the provision of Bank Services and take such action as SVB deems necessary to enforce its rights and remedies (including, without limitation, any Enforcement Action (as defined in Addendum 3) against the Collateral and Borrower) to satisfy the Reimbursement Obligations with respect to Bank Services, all without prior notice to or the consent of Hercules. Notwithstanding the terms of this Agreement to the contrary, any Proceeds of Collection received by Agent or a Lender shall be paid over to SVB to be applied to the Reimbursement Obligations, with any remainder, after satisfaction of the Reimbursement Obligations to SVB, to be distributed to SVB and Hercules in the manner and order set forth in Sections 2.6 and 10.2, as applicable. In addition to the provision of Bank Services by SVB, which may be provided on a cash secured or a non-cash secured basis, the parties acknowledge that Borrower may in the future desire to pledge cash and/or securities in connection with the provision by SVB to Borrower of Bank Services. The parties agree that notwithstanding anything to the contrary contained in this Agreement, Borrower may pledge cash and/or securities in an aggregate amount up to (and without duplication of) the Bank Services Cap to SVB as collateral to secure its obligations to SVB relating to Bank Services (such cash and/or securities and the proceeds thereof (but expressly excluding any other Collateral) being hereinafter referred to as the "Cash Collateral"). Hercules may not foreclose upon, or force SVB to take any actions with respect to, the Cash Collateral notwithstanding anything in this Agreement to the contrary. SVB consents to Borrower's grant to Lenders of liens and security interests against the Cash Collateral, and the parties agree that the Cash Collateral and proceeds thereof shall be distributed to SVB and Hercules, after satisfaction of the Reimbursement Obligations to SVB, in the manner and order set forth in Sections 2.6 and 10.2, as applicable. This clause (i) shall not in any way (a) limit SVB's rights under Section 10.2 or (b) supersede the limitations on Bank Services as set forth in clause (a) of this Addendum.

(n) *Representations and Warranties.*

(i) Hercules represents and warrants that it is a corporation duly existing and in good standing under the laws of Maryland and is qualified and licensed to do business in, and is in good standing in, any state in which the conduct of its business or its ownership of property requires that it be so qualified, except for such states as to which any failure so to qualify would not have a material adverse effect on Hercules. SVB represents and warrants that it is a banking corporation duly existing and in good standing under the laws of California and it is qualified and licensed to do business in, and is in good standing in, any state in which the conduct of its business or its ownership of property requires, that it be so qualified, except for such states as to which any failure so to qualify would not have a material adverse effect on SVB.

(ii) Each Lender represents and warrants that it has all necessary power and authority to execute, deliver and perform this Agreement in accordance with the terms hereof and that it has all requisite power and authority to own and operate its properties and to carry on its business as now conducted.

(o) Each Lender represents and warrants that (a) the execution and delivery of this Agreement and the consummation of the transactions contemplated herein have each been duly authorized by all necessary action on the part of such Lender and (b) this Agreement has been duly executed and delivered and constitutes a legal, valid and binding obligation of such Lender, enforceable in accordance with its terms, except as the enforceability thereof may be limited by bankruptcy, insolvency or other similar

laws of general application relating to or affecting the enforcement of creditors' rights or by general principles of equity.

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

EXHIBIT A

ADVANCE REQUEST

To: Agent: Date: ___
Hercules Capital, Inc. ("Agent")
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
email: [**]
Attn: Legal Department; Cristy Barnes

Borrower hereby requests Agent to cause Lenders to make an Advance in the amount of _____ Dollars ($_____) on _____, _____ (the "Advance Date") pursuant to the Loan and Security Agreement among Borrower, Agent and Lenders (the "Agreement"). Capitalized words and other terms used but not otherwise defined herein are used with the same meanings as defined in the Agreement.

Please:

(a) Issue a check payable to Borrower _____

or

(b) Wire Funds to Borrower's account _____

Bank: ____
Address: ____

____

ABA Number: ____
Account Number: ____
Account Name: ____
Contact Person: ____
Phone Number: ____
To Verify Wire Info: ___
Email address: ____

Borrower represents that the conditions precedent to the Advance set forth in the Agreement are satisfied and shall be satisfied upon the making of such Advance, including but not limited to: (i) that no event that has had or could reasonably be expected to have a Material Adverse Effect has occurred and is continuing; (ii) that the representations and warranties set forth in the Loan Documents are and shall be true and correct in all material respects on and as of the Advance Date with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date; (iii) that Borrower is in compliance with all the terms and provisions set forth in each Loan Document on its part to be observed or performed; and (iv) that as of the Advance Date, no fact or condition exists that constitutes (or could, with the passage of time, the giving of notice, or both constitute) an Event of Default under the Loan Documents. Borrower understands and acknowledges that Agent has the right to review the financial information supporting this representation and, based upon such review in its sole discretion, Lenders may decline to fund the requested Advance.

Borrower hereby represents that Borrower's jurisdiction of organization, organizational form, legal name and chief executive office location have not changed since the date of the Agreement or, if the Attachment to this Advance Request is completed, are as set forth in the Attachment to this Advance Request.

Borrower agrees to notify Agent promptly before the funding of the Loan if any of the matters which have been represented above shall not be true and correct on the Advance Date and if Agent has received no such notice before the Advance Date then the statements set forth above shall be deemed to have been made and shall be deemed to be true and correct as of the Advance Date.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

This Advance Request is duly executed as of the date set forth above.

GRITSTONE BIO, INC.

SIGNATURE: ____
TITLE: _
PRINT NAME: ___

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

ATTACHMENT TO ADVANCE REQUEST

Dated: _____

Borrower hereby represents and warrants to Agent that the current name and organizational status of Borrower is as follows:

Name:
Type of organization:
State of organization:
Organization file number:

Borrower hereby represents and warrants to Agent that the street addresses, cities, states and postal codes of Borrower's current chief executive office locations are as follows:

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

EXHIBIT B

NAME, LOCATIONS, AND OTHER INFORMATION

1. Borrower represents and warrants to Agent that Borrower's current name and organizational status as of the Closing Date is as follows:

Legal Name: Gritstone bio, Inc.
Type of organization: corporation
State of organization: Delaware
Organization file number: 5786190

2. Borrower represents and warrants to Agent that for five (5) years prior to the Closing Date, Borrower did not do business under any other name or organization or form except the following:

Legal Names	Periods of Use
Gritstone bio, Inc.	May 3, 2021 – Present
Gritstone Oncology, Inc.	Formation – May 3, 2021

Borrower's fiscal year ends on: December 31
Borrower's federal employer tax identification number is: 47-4859534
Borrower represents and warrants to Agent that its chief executive office is located at: 5959 Horton St #300, Emeryville, CA 94608

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

EXHIBIT C

PATENTS, TRADEMARKS, COPYRIGHTS AND LICENSES

Omitted pursuant to Regulation S-K, Item 601(a)(5)

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

EXHIBIT D

DEPOSIT ACCOUNTS AND INVESTMENT ACCOUNTS

Omitted pursuant to Regulation S-K, Item 601(a)(5)

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

EXHIBIT E

COMPLIANCE CERTIFICATE

Hercules Capital, Inc. (as "Agent")
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301
email: [**]
Attention: Chief Legal Officer and Cristy Barnes

Reference is made to that certain Loan and Security Agreement dated as of July 19, 2022, by and among GRITSTONE BIO, INC., a Delaware corporation, each of its Subsidiaries from time to time party thereto (individually or collectively, as the context may require, "Borrower"), HERCULES CAPITAL, INC., a Maryland corporation ("Hercules"), SILICON VALLEY BANK, a California corporation ("SVB"), the several banks and other financial institutions or entities from time to time party thereto (each, a "Lender," and collectively, "Lenders") and Hercules, in its capacity as administrative agent and collateral agent for Lenders (in such capacity "Agent"). All capitalized terms not defined herein shall have the same meaning as defined in the Loan Agreement.

The undersigned is an Officer of Borrower, knowledgeable of all Borrower's financial matters, and is authorized to provide certification of information regarding Borrower; hereby certifies, in such capacity, that in accordance with the terms and conditions of the Loan Agreement, Borrower hereby reaffirms that all representations and warranties contained therein are true and correct on and as of the date of this Compliance Certificate with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date, after giving effect in all cases to any standard(s) of materiality contained in the Loan Agreement as to such representations and warranties. Attached are the required documents supporting the above certification. [The undersigned further certifies that no Event of Default exists as of the date hereof. The undersigned further certifies that any financial materials delivered with this Compliance Certificate are prepared in accordance with GAAP (except for the absence of footnotes with respect to unaudited financial statement and subject to normal year-end adjustments) and are consistent from one period to the next except as explained below.]

REPORTING REQUIREMENT	REQUIRED	CHECK IF ATTACHED
Monthly Financial Statements	Monthly, within 30 days	[_]
Quarterly Financial Statements	Quarterly, within 45 days	[_]
Audited Financial Statements	Annually, within 90 days of fiscal year end	[_]

The undersigned hereby also confirms the below disclosed accounts represent all depository accounts and securities accounts presently open in the name of Borrower or its Subsidiary/Affiliate, as applicable. Each new account that has been opened since delivery of the previous Compliance Certificate is designated below with a "*".

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

		Depository AC #	Financial Institution	Account Type (Depository / Securities)	Last Month Ending Account Balance	Purpose of Account
BORROWER Name/Address:						
	1					
	2					
	3					
	4					
	5					
	6					
	7					
SUBSIDIARY / AFFILIATE Name/Address						
	1					
	2					
	3					
	4					
	5					
	6					
	7					

Financial Covenant	**Required Level**	**Actual Level**	**In Compliance? (Y; N; N/A)**
Minimum Cash *Section 7.20(a) of the Loan Agreement*	Greater than or equal to (x) the outstanding principal amount of the Term Loan Advances, *multiplied by* (y) (i) prior to the Performance Milestone IV Date, 0.55 and (ii) at all times after the Performance Milestone IV Date, 0.45	[ ]	Yes No N/A

GRITSTONE BIO, INC.

SIGNATURE: ____
TITLE: _
PRINT NAME: ___

Certain information has been omitted from this Exhibit 10.1 because it is both (i) not material and (ii) would likely cause competitive harm to the Company, if publicly disclosed. Double asterisks [**] denote omissions.

EXHIBIT F

FORM OF JOINDER AGREEMENT

This Joinder Agreement (the "Joinder Agreement") is made and dated as of [ ], and is entered into by and between_____, a _____ corporation ("Subsidiary"), and HERCULES CAPITAL, INC., a Maryland corporation (as "Agent").

RECITALS

A. Subsidiary's Affiliate, Gritstone bio, Inc. ("Company") has entered into that certain Loan and Security Agreement dated as of July 19, 2022, with the several banks and other financial institutions or entities from time to time party thereto as lender (each, a "Lender", and collectively, "Lenders") and Agent, as such agreement may be amended (the "Loan Agreement"), together with the other agreements executed and delivered in connection therewith; and

B. Subsidiary acknowledges and agrees that it will benefit both directly and indirectly from Company's execution of the Loan Agreement and the other agreements executed and delivered in connection therewith.

AGREEMENT

NOW THEREFORE, Subsidiary and Agent agree as follows:

1. The recitals set forth above are incorporated into and made part of this Joinder Agreement. Capitalized terms not defined herein shall have the meaning provided in the Loan Agreement.

2. By signing this Joinder Agreement, Subsidiary shall be bound by the terms and conditions of the Loan Agreement the same as if it were a Borrower (as defined in the Loan Agreement) under the Loan Agreement, mutatis mutandis, provided, however, that (a) with respect to (i) Section 5.1 of the Loan Agreement, Subsidiary represents that it is an entity duly organized, legally existing and in good standing under the laws of [_____], (b) neither Agent nor Lenders shall have any duties, responsibilities or obligations to Subsidiary arising under or related to the Loan Agreement or the other Loan Documents, (c) that if Subsidiary is covered by Company's insurance, Subsidiary shall not be required to maintain separate insurance or comply with the provisions of Sections 6.1 and 6.2 of the Loan Agreement, and (d) that as long as Company satisfies the requirements of Section 7.1 of the Loan Agreement, Subsidiary shall not have to provide Agent separate Financial Statements. To the extent that Agent or Lenders has any duties, responsibilities or obligations arising under or related to the Loan Agreement or the other Loan Documents, those duties, responsibilities or obligations shall flow only to Company and not to Subsidiary or any other Person or entity. By way of example (and not an exclusive list): (i) Agent's providing notice to Company in accordance with the Loan Agreement or as otherwise agreed among Company, Agent and Lenders shall be deemed provided to Subsidiary; (ii) a Lenders' providing an Advance to Company shall be deemed an Advance to Subsidiary; and (iii) Subsidiary shall have no right to request an Advance or make any other demand on Lenders.

3. Subsidiary agrees not to certificate its equity securities without Agent's prior written consent, which consent may be conditioned on the delivery of such equity securities to Agent in order to perfect Agent's security interest in such equity securities.

4. Subsidiary acknowledges that it benefits, both directly and indirectly, from the Loan Agreement, and hereby waives, for itself and on behalf on any and all successors in interest (including without limitation any assignee for the benefit of creditors, receiver, bankruptcy trustee or itself as debtor-in-possession under any bankruptcy proceeding) to the fullest extent provided by law, any and all claims, rights or defenses to the enforcement of this Joinder Agreement on the basis that (a) it failed to receive adequate consideration for the execution and delivery of this Joinder Agreement or (b) its obligations under this Joinder Agreement are avoidable as a fraudulent conveyance.

5. As security for the prompt and complete payment when due (whether on the payment dates or otherwise) of all the Secured Obligations, Subsidiary grants to Agent a security interest in all of Subsidiary's right, title, and interest in and to the Collateral.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

SUBSIDIARY:

[_____]

By: _
Name: __
Title: ___

Address:
[___]
[___]
[___]

Telephone: [__]
email: [__]

AGENT:

HERCULES CAPITAL, INC.

By: _
Name: __
Title: ___

Address:
400 Hamilton Ave., Suite 310
Palo Alto, CA 94301
email: [**]
Telephone: 650-289-3060

[SIGNATURE PAGE TO JOINDER AGREEMENT]

EXHIBIT G

ACH DEBIT AUTHORIZATION AGREEMENT

Hercules Capital, Inc.
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301

Re: Loan and Security Agreement dated as of July 19, 2022 (the "Agreement") by and among GRITSTONE BIO, INC., each of its Subsidiaries from time to time party thereto (individually or collectively, as the context may require, "Borrower"), Hercules Capital, Inc., as administrative agent ("Agent") and the lenders party thereto (each, a "Lender", and collectively, "Lender").

In connection with the above referenced Agreement, the undersigned Borrower hereby authorizes Agent to initiate debit entries for (i) the periodic payments due under the Agreement and (ii) reasonable and documented out-of-pocket legal fees and costs incurred by Agent or Lenders pursuant to Section 11.12 of the Agreement to its account indicated below. The undersigned authorizes the depository institution named below to debit to such account.

DEPOSITORY NAME	BRANCH
CITY	STATE AND ZIP CODE
TRANSIT/ABA NUMBER	ACCOUNT NUMBER

This authority shall remain in full force and effect so long as any amounts are due under the Agreement.
GRITSTONE BIO, INC.

By: _
Name: ___
Date: ____

EXHIBIT H-1

FORM OF U.S. TAX COMPLIANCE CERTIFICATE

(For Foreign Lenders That Are Not Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Loan and Security Agreement dated as of July 19, 2022 (as amended, supplemented or otherwise modified from time to time, the "Loan Agreement") by and among GRITSTONE BIO, INC., a Delaware corporation, and certain of its Subsidiaries (as defined in the Loan Agreement) (hereinafter collectively referred to as the "Borrower"), the several banks and other financial institutions or entities from time to time parties to the Loan Agreement (collectively, referred to as "Lenders"), and HERCULES CAPITAL, INC., a Maryland corporation, in its capacity as administrative agent and collateral agent for itself and the Lenders (in such capacity, "Agent").

Pursuant to the provisions of Addendum 1 of the Loan Agreement, the undersigned hereby certifies that (i) it is the sole record and beneficial owner of the Loan(s) (as well as any promissory note(s) evidencing such Loan(s)) in respect of which it is providing this certificate, (ii) it is not a "bank" within the meaning of Section 881(c)(3)(A) of the Code, (iii) it is not a "ten percent shareholder" of Borrower within the meaning of Section 871(h)(3)(B) of the Code and (iv) it is not a "controlled foreign corporation" related to Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished Agent and Borrower with a certificate of its non-U.S. Person status on IRS Form W-8BEN or IRS Form W-8BEN-E. By executing this certificate, the undersigned agrees that (1) if the information provided in this certificate changes, the undersigned shall promptly so inform Borrower and Agent, and (2) the undersigned shall have at all times furnished Borrower and Agent with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Loan Agreement and used herein shall have the meanings given to them in the Loan Agreement.

Date: _____ ___, 20___ [NAME OF LENDER]

By: ______________________________
Name: ______________________________
Title: ______________________________

EXHIBIT H-2

FORM OF U.S. TAX COMPLIANCE CERTIFICATE

(For Foreign Participants That Are Not Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Loan and Security Agreement dated as of July 19, 2022 (as amended, supplemented or otherwise modified from time to time, the "Loan Agreement") by and among GRITSTONE BIO, INC., a Delaware corporation, and certain of its Subsidiaries (as defined in the Loan Agreement) (hereinafter collectively referred to as the "Borrower"), the several banks and other financial institutions or entities from time to time parties to the Loan Agreement (collectively, referred to as "Lenders"), and HERCULES CAPITAL, INC., a Maryland corporation, in its capacity as administrative agent and collateral agent for itself and the Lenders (in such capacity, "Agent").

Pursuant to the provisions of Addendum 1 of the Loan Agreement, the undersigned hereby certifies that (i) it is the sole record and beneficial owner of the participation in respect of which it is providing this certificate, (ii) it is not a "bank" within the meaning of Section 881(c)(3)(A) of the Code, (iii) it is not a "ten percent shareholder" of Borrower within the meaning of Section 871(h)(3)(B) of the Code and (iv) it is not a "controlled foreign corporation" related to Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished its participating Lender with a certificate of its non-U.S. Person status on IRS Form W-8BEN or IRS Form W-8BEN-E. By executing this certificate, the undersigned agrees that (1) if the information provided in this certificate changes, the undersigned shall promptly so inform such Lender in writing, and (2) the undersigned shall have at all times furnished such Lender with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Loan Agreement and used herein shall have the meanings given to them in the Loan Agreement.

Date: _____ ___, 20___ [NAME OF PARTICIPANT]

By: ______________________________
Name: ______________________________
Title: ______________________________

EXHIBIT H-3

FORM OF U.S. TAX COMPLIANCE CERTIFICATE

(For Foreign Participants That Are Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Loan and Security Agreement dated as of July 19, 2022 (as amended, supplemented or otherwise modified from time to time, the "Loan Agreement") by and among GRITSTONE BIO, INC., a Delaware corporation, and certain of its Subsidiaries (as defined in the Loan Agreement) (hereinafter collectively referred to as the "Borrower"), the several banks and other financial institutions or entities from time to time parties to the Loan Agreement (collectively, referred to as "Lenders"), and HERCULES CAPITAL, INC., a Maryland corporation, in its capacity as administrative agent and collateral agent for itself and the Lenders (in such capacity, "Agent").

Pursuant to the provisions of Addendum 1 of the Loan Agreement, the undersigned hereby certifies that (i) it is the sole record owner of the participation in respect of which it is providing this certificate, (ii) its direct or indirect partners/members are the sole beneficial owners of such participation, (iii) with respect to such participation, neither the undersigned nor any of its direct or indirect partners/members is a "bank" extending credit pursuant to a loan agreement entered into in the ordinary course of its trade or business within the meaning of Section 881(c)(3)(A) of the Code, (iv) none of its direct or indirect partners/members is a "ten percent shareholder" of Borrower within the meaning of Section 871(h)(3)(B) of the Code and (v) none of its direct or indirect partners/members is a "controlled foreign corporation" related to Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished its participating Lender with IRS Form W-8IMY accompanied by one of the following forms from each of its partners/members that is claiming the portfolio interest exemption: (i) an IRS Form W-8BEN or IRS Form W-8BEN-E or (ii) an IRS Form W-8IMY accompanied by an IRS Form W-8BEN or IRS Form W-8BEN-E from each of such partner's/member's beneficial owners that is claiming the portfolio interest exemption. By executing this certificate, the undersigned agrees that (1) if the information provided in this certificate changes, the undersigned shall promptly so inform such Lender and (2) the undersigned shall have at all times furnished such Lender with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Loan Agreement and used herein shall have the meanings given to them in the Loan Agreement.

Date: _____ ___, 20___ [NAME OF PARTICIPANT]

By: ______________________________
Name: ______________________________
Title: ______________________________

EXHIBIT H-4

FORM OF U.S. TAX COMPLIANCE CERTIFICATE

(For Foreign Lenders That Are Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Loan and Security Agreement dated as of July 19, 2022 (as amended, supplemented or otherwise modified from time to time, the "Loan Agreement") by and among GRITSTONE BIO, INC., a Delaware corporation, and certain of its Subsidiaries (as defined in the Loan Agreement) (hereinafter collectively referred to as the "Borrower"), the several banks and other financial institutions or entities from time to time parties to the Loan Agreement (collectively, referred to as "Lenders"), and HERCULES CAPITAL, INC., a Maryland corporation, in its capacity as administrative agent and collateral agent for itself and the Lenders (in such capacity, "Agent").

Pursuant to the provisions of Addendum 1 of the Loan Agreement, the undersigned hereby certifies that (i) it is the sole record owner of the Loan(s) (as well as any promissory note(s) evidencing such Loan(s)) in respect of which it is providing this certificate, (ii) its direct or indirect partners/members are the sole beneficial owners of such Loan(s) (as well as any promissory note(s) evidencing such Loan(s)), (iii) with respect to the extension of credit pursuant to this Loan Agreement or any other Loan Document, neither the undersigned nor any of its direct or indirect partners/members is a "bank" extending credit pursuant to a loan agreement entered into in the ordinary course of its trade or business within the meaning of Section 881(c)(3)(A) of the Code, (iv) none of its direct or indirect partners/members is a "ten percent shareholder" of Borrower within the meaning of Section 871(h)(3)(B) of the Code and (v) none of its direct or indirect partners/members is a "controlled foreign corporation" related to Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished Agent and Borrower with IRS Form W-8IMY accompanied by one of the following forms from each of its partners/members that is claiming the portfolio interest exemption: (i) an IRS Form W-8BEN or IRS Form W-8BEN-E or (ii) an IRS Form W-8IMY accompanied by an IRS Form W-8BEN or IRS Form W-8BEN-E from each of such partner's/member's beneficial owners that is claiming the portfolio interest exemption. By executing this certificate, the undersigned agrees that (1) if the information provided in this certificate changes, the undersigned shall promptly so inform Borrower and Agent, and (2) the undersigned shall have at all times furnished Borrower and Agent with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Loan Agreement and used herein shall have the meanings given to them in the Loan Agreement.

Date: _____ ___, 20___ [NAME OF LENDER]

By: ______________________________
Name: ______________________________
Title: ______________________________

Schedule 1.1(a)

COMMITMENTS

LENDERS	TRANCHE I COMMITMENT	TRANCHE II COMMITMENT	TRANCHE III COMMITMENT	TRANCHE IV COMMITMENT	TRANCHE V COMMITMENT	TOTAL COMMITMENT
Hercules Capital, Inc.	$15,000,000	$5,000,000	$5,000,000	$5,000,000	$10,000,000	$40,000,000
Silicon Valley Bank	$15,000,000	$5,000,000	$5,000,000	$5,000,000	$10,000,000	$40,000,000
TOTAL COMMITMENTS	$30,000,000	$10,000,000	$10,000,000	$10,000,000	$20,000,000	$80,000,000

Schedule 1A Existing Indebtedness

Omitted pursuant to Regulation S-K, Item 601(a)(5)

Schedule 1B Existing Investments

Omitted pursuant to Regulation S-K, Item 601(a)(5)

Schedule 1C Existing Liens

Omitted pursuant to Regulation S-K, Item 601(a)(5)

Schedule 5.8 Tax Matters

Omitted pursuant to Regulation S-K, Item 601(a)(5)

Schedule 5.9 Intellectual Property Claims

Omitted pursuant to Regulation S-K, Item 601(a)(5)

Schedule 5.10(a) Current Company IP

Omitted pursuant to Regulation S-K, Item 601(a)(5)

Schedule 5.10(d) Matters Relating to current Material Agreements

Omitted pursuant to Regulation S-K, Item 601(a)(5)

Schedule 5.10(f) Enforceability, Entitlement and Exploitation of Current Company IP

Omitted pursuant to Regulation S-K, Item 601(a)(5)

Schedule 5.10(i) Claims of Infringement on Third Party IP By Current Company IP

Omitted pursuant to Regulation S-K, Item 601(a)(5)

Schedule 5.10(k) Obligations Relating to Company IP

Omitted pursuant to Regulation S-K, Item 601(a)(5)

Schedule 5.10(l) Third Party Infringements of Company IP

Omitted pursuant to Regulation S-K, Item 601(a)(5)

Schedule 5.10(o) Intellectual Property

Omitted pursuant to Regulation S-K, Item 601(a)(5)

Schedule 5.11 Borrower Products

Omitted pursuant to Regulation S-K, Item 601(a)(5)

Schedule 5.14 Subsidiaries

Omitted pursuant to Regulation S-K, Item 601(a)(5)

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Andrew Allen, M.D., Ph.D., certify that:

1. I have reviewed this quarterly report on Form 10-Q of Gritstone bio, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 3, 2022

By: /s/ Andrew Allen
Andrew Allen, M.D., Ph.D.
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Vassiliki Economides, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Gritstone bio, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 3, 2022

By: /s/ Vassiliki "Celia" Economides
Vassiliki "Celia" Economides
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Gritstone bio, Inc. (the "Company") for the period ended September 30, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Andrew Allen, M.D., Ph.D., President and Chief Executive Officer (Principal Executive Officer) of the Company, and Vassiliki Economides, Chief Financial Officer (Principal Financial Officer) of the Company, respectively, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 3, 2022

/s/ Andrew Allen
Andrew Allen, M.D., Ph.D.
President and Chief Executive Officer
(Principal Executive Officer)

Date: November 3, 2022

/s/ Vassiliki "Celia" Economides
Vassiliki "Celia" Economides
Chief Financial Officer
(Principal Financial Officer)