CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Security(2)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, par value \$0.0001 per share	9,586,478	\$18.62	\$178,500,220.36	\$19,475
Common Stock underlying Pre-Funded Warrants(3)	27,480,719	\$18.62	\$511,690,987.78	\$55,826
Total			\$690,191,208.14	\$75,301

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement also covers any indeterminate number of additional shares of common stock issuable upon stock splits, stock dividends, dividends or other distributions, recapitalizations or similar events with respect to the shares of common stock being registered pursuant to this registration statement.
- (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) under the Securities Act, based upon the average of the high and low prices of the common stock on the Nasdaq Global Select Market on January 28, 2021.
- (3) Represents shares of Common Stock, par value \$0.0001 per share, issuable upon the exercise of pre-paid warrants at an exercise price of \$0.01 per share (the "Pre-Funded Warrants").

PROSPECTUS SUPPLEMENT (To Prospectus dated January 29, 2021)



GRITSTONE ONCOLOGY, INC.

37,067,197 Shares of Common Stock

This prospectus supplement relates to the resale or other disposition from time to time of up to (i) 9,586,478 shares of our common stock, par value \$0.001 per share (the "Common Stock"), and (ii) up to 27,480,719 shares of Common Stock upon the exercise of warrants by the selling stockholders identified in this prospectus supplement, including their transferees, pledgees, donees or successors.

The selling stockholders may, from time to time, sell, transfer, or otherwise dispose of any or all of their securities from time to time on any stock exchange, market, or trading facility on which the securities are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices. See "Plan of Distribution" which begins on page S-14.

We are not offering any shares of our Common Stock for sale under this prospectus supplement. We will not receive any of the proceeds from the sale of Common Stock by the selling stockholders. However, we will generate proceeds in the event of a cash exercise of the warrants by the selling stockholders. All expenses of registration incurred in connection with this offering are being borne by us. All selling and other expenses incurred by the selling stockholders will be borne by the selling stockholders.

Our Common Stock is listed on the Nasdaq Global Select Market under the symbol "GRTS." On January 28, 2021, the last reported sale price of our Common Stock on the Nasdaq Global Select Market was \$17.16 per share.

We may amend or supplement this prospectus supplement from time to time by filing amendments or supplements as required. You should read the entire prospectus and any amendments or supplements carefully before you make your investment decision.

Investing in our securities involves risks. See "<u>Risk Factors</u>" on page S-4, and any applicable prospectus supplement, and under similar headings in the other documents that are incorporated by reference into this prospectus supplement.

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

Prospectus Supplement dated January 29, 2021

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement is part of a registration statement on Form S-3 that we filed with the U.S. Securities and Exchange Commission (the "SEC) using a "shelf" registration or continuous offering process.

You should read this prospectus supplement and the information and documents incorporated by reference carefully. Such documents contain important information you should consider when making your investment decision. See "Where You Can Find More Information" and "Incorporation of Documents by Reference" in this prospectus supplement.

This prospectus supplement may be supplemented from time to time to add, to update or change information in this prospectus supplement. Any statement contained in this prospectus supplement will be deemed to be modified or superseded for purposes of this prospectus supplement to the extent that a statement contained in such prospectus supplement modifies or supersedes such statement. Any statement so modified will be deemed to constitute a part of this prospectus supplement only as so modified, and any statement so superseded will be deemed not to constitute a part of this prospectus supplement. You should rely only on the information contained or incorporated by reference in this prospectus supplement, any applicable prospectus supplement or any related free writing prospectus. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus supplement, any applicable prospectus supplement or any related free writing prospectus. This prospectus supplement is not an offer to sell securities, and it is not soliciting an offer to buy securities, in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus supplement or any prospectus supplement, as well as information we have filed with the SEC that is incorporated by reference, is accurate as of the date on the front of those documents only, regardless of the time of delivery of this prospectus supplement or any applicable prospectus supplement, or any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates.

This prospectus supplement contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus supplement is a part, and you may obtain copies of those documents as described below under "Where You Can Find More Information."

Unless otherwise stated or the context requires otherwise, references in this prospectus supplement to "Gritstone," the "company" or the "Company," "we," "us," or "our" refer to Gritstone Oncology, Inc. and its consolidated subsidiary unless stated or the context otherwise requires.

ABOUT THE COMPANY

Company Overview

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

We initiated a first-in-human Phase 1/2 clinical trial of GRANITE, our first personalized immunotherapy product candidate, in the fourth quarter of 2018, evaluating it in the treatment of common solid tumors, including metastatic non-small cell lung cancer and gastroesophageal, bladder and colorectal cancers, in each case in combination with checkpoint inhibitors provided by our collaborator, Bristol-Myers Squibb Company, or BMS. We dosed our first patient in this trial, GO-004, in the first quarter of 2019. The Phase 1 portion of the GO-004 Phase 1/2 trial has established a dose for further investigation in Phase 2 and has confirmed the safety, tolerability and, importantly, immunogenicity of our product candidate. The Phase 2 portion of the GO-004 trial has started enrolling patients in the third quarter of 2020 with an objective to identify interpretable signals of efficacy when combining our vaccine with immune checkpoint inhibitors with a focus on tumor types that do not respond to immune checkpoint inhibitors (MSS colorectal cancers), respond poorly (gastroesophageal cancers) or have progressed after first line therapy with immune checkpoint inhibitors (NSCLC). We will seek to further evaluate efficacy and safety in the Phase 2 cohort expansion portion in several common solid tumor types.

Our second tumor-specific product candidate series, SLATE, utilizes the same antigen delivery system as GRANITE but contains a fixed cassette with TSNA that are shared across a subset of cancer patients rather than a cassette unique to an individual patient, providing us with an off-the-shelf alternative to our personalized manufactured product candidate, GRANITE. The U.S. Food and Drug Administration, or FDA, allowed the Investigational New Drug application, or IND, for SLATE to proceed in June 2019 and we have initiated a Phase 1/2 clinical trial of SLATE, GO-005, in combination with immune checkpoint inhibitors for the treatment of patients with advanced solid tumors, including metastatic non-small cell lung cancer, pancreatic cancer and colorectal cancer. We dosed our first patient in this trial, GO-005, in the third quarter of 2019. The first patient of the Phase 2 cohort expansion was dosed early in the third quarter of 2020. Based on preliminary results from the Phase 1 portion of the GO-005 study, the Phase 2 portion now enrolls patients with metastatic non-small cell lung cancer and those with tumors expressing certain variants of TP53. We are preparing a second version of the fixed cassette with repeated epitopes of KRAS which will be available in the first half of 2021 to patients with pancreatic and colorectal cancers in the GO-005 Phase 2 portion.

We are developing a second immunotherapy platform targeting shared tumor antigens, including shared TSNA, which relies upon bispecific antibodies, or BiSAb, targeting solid tumors. BiSAb have been shown by others to exhibit early evidence of efficacy in B cell malignancies, using B cell-specific targets such as CD19, CD20 and BCMA, and our goal is to extend this concept into the treatment of solid tumors using our novel approach to identify tumor-specific antigens and antibody fragments against such targets. Our BiSAb approach uses an antibody fragment to recognize a tumor antigen and, in the same molecule, a different antibody fragment to recognize immune effector cells such as CD3+ T cells. These therapeutics aim to refocus immune effector cells specifically upon the tumor through antibody-driven recognition of tumor-specific antigens. We use our EDGE platform to identify novel solid tumor-specific antigens and develop antibody fragments that bind tightly and with high specificity to these targets. These antibody fragments are deployed within a bispecific antibody framework to form novel "drug-in-a-bottle" therapeutic candidates. This program identified a development candidate at the end of fiscal year 2020.

Recent Developments

On January 19, 2021, we announced that we are advancing development of a second generation vaccine against SARS-CoV-2, the virus that causes COVID-19, with potential for both prolonged protection and potency against Spike mutants. We and the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health, have entered into a clinical trial agreement to initiate clinical testing. A Phase 1 clinical trial, expected to be conducted through the NIAID-supported Infectious Diseases Clinical Research Consortium (IDCRC), is in development. The Bill & Melinda Gates Foundation (Gates Foundation) is supporting the preclinical evaluation of the vaccine.

About Gritstone

We were founded in August 2015 as a Delaware corporation. Our principal executive offices are located at 5959 Horton Street, Suite 300, Emeryville, California 94608, and our telephone number is (510) 871-6100. Our website address is www.gritstoneoncology.com. The information on, or that can be accessed through, our website is not part of this prospectus supplement and is not incorporated by reference herein. We have included our website address as an inactive textual reference only.

RISK FACTORS

An investment in our Common Stock involves risks. Prior to making a decision about investing in our Common Stock, you should consider carefully the risks together with all of the other information contained or incorporated by reference in this prospectus supplement, including any risks described in the section entitled "Risk Factors" contained in any supplements to this prospectus supplement, in our Annual Report on Form 10-K for the year ended December 31, 2019, in our Quarterly Report on Form 10-Q for the quarter ended September 30, 2020 and in our subsequent filings with the SEC. Each of the referenced risks and uncertainties could adversely affect our business, prospects, operating results and financial condition, as well as adversely affect the value of an investment in our securities. Additional risks not known to us or that we believe are immaterial may also adversely affect our business, operating results and financial condition and the value of an investment in our securities.

DESCRIPTION OF PRIVATE PLACEMENT OF COMMON STOCK AND WARRANTS

On December 22, 2020, we entered into a Securities Purchase Agreement (the "First Purchase Agreement") with certain purchasers identified on the signature pages thereto, pursuant to which we agreed to sell and certain purchasers agreed to purchase (i) an aggregate of 5,543,351 shares of Common Stock at a per share purchase price of \$3.34, the Nasdaq Official Closing Price of the Company's Common Stock on December 22, 2020, and (ii) pre-funded warrants (the "Pre-Funded Warrants") to purchase an aggregate of 27,480,719 shares of Common Stock (the "Pre-Funded Warrant Shares"), in a private placement transaction (the "First Private Placement"). On December 28, 2020, we entered into an additional Securities Purchase Agreement (together with the First Purchase Agreement, the "Purchase Agreements") with certain other purchasers identified on the signature pages thereto, pursuant to which we agreed to sell and certain purchasers agreed to purchase an aggregate of 4,043,127 shares of Common Stock at a per share purchase price of \$3.71, in a private placement transaction (the "Second Private Placement"). The closing of the First Private Placement occurred on December 28, 2020 (the "First Closing") and the closing of the Second Private Placement occurred on December 30, 2020.

The Pre-Funded Warrants will expire when exercised in full, will have a nominal exercise price of \$0.01 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. The aggregate gross cash proceeds to the Company for the shares of Common Stock and Pre-Funded Warrants sold pursuant to the Purchase Agreements (collectively, the "Securities") was \$125.0 million. The purchasers of the Securities are the selling stockholders named in this prospectus supplement.

Pre-Funded Warrants

The material terms and provisions of the Pre-Funded Warrants to purchase shares of Common Stock are summarized below. This summary is subject to and qualified in its entirety by the form of pre-funded warrant, which was filed with the SEC as an exhibit to the Company's Form 8-K on December 28, 2020.

Exercisability. The holder may exercise the Pre-Funded Warrants at any time. There is no expiration date for the Pre-Funded Warrants. As further described under "Selling Stockholders," notwithstanding the foregoing, certain holders will be prohibited from exercising such warrants into shares of our Common Stock if, as a result of such exercise, the holder, together with its affiliates, would own more than 9.99% of the total number of shares of our Common Stock then issued and outstanding. The Pre-Funded Warrants are exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our Common Stock purchased upon such exercise (except in the case of a cashless exercise as discussed below).

Exercise Price. The exercise price of each Pre-Funded Warrant is \$3.34 per share of Common Stock, of which \$3.33 per share was paid by each purchaser of Pre-Funded Warrants at the First Closing. The exercise price of the warrants is subject to appropriate adjustment in the event of stock dividends, subdivisions, stock splits, stock combinations, reclassifications or reorganizations affecting our Common Stock.

Payment of Exercise Price. The warrant holders have the option to provide payment of the exercise price of the shares being acquired upon exercise of the warrants (i) by wire transfer or cashier's check, or, in certain circumstances as described below (ii) by cashless exercise.

Cashless Exercise. If at any time there is no effective resale registration statement registering the resale of the Pre-Funded Warrants, in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise the net number of shares of Common Stock determined according to a formula set forth in the Pre-Funded Warrants

Transferability. Subject to applicable laws and the restriction on transfer set forth in the warrant agreement, the Pre-Funded Warrants may be transferred at the option of the holders upon surrender of the warrants to the warrant agent together with the appropriate instruments of transfer.

Change of Control Transactions. If, at any time while each Pre-Funded Warrant is outstanding, there is a Change of Control, which generally includes a merger or consolidation resulting in the sale of 50% or more of the voting securities of the Company, the sale of all or substantially all of the assets or voting securities of the Company, or other change of control transaction, then the holder has the right thereafter to receive, upon exercise of the Pre-Funded Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Change of Control if it had been, immediately prior to such Change of Control, the holder of the number of Warrant Shares then issuable upon exercise in full of the Pre-Funded Warrant (the "Alternate Consideration"). If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Change of Control, then the holder will be given the same choice as to the Alternate Consideration it receives upon any exercise of the Pre-Funded Warrants following such Change of Control.

Events of Failure. In the event that we fail to timely deliver shares of Common Stock to any holder, we are required to make whole any holder who purchases shares of Common Stock to deliver in satisfaction of a sale by such holder of shares of Common Stock issuable upon an exercise of the Pre-Funded Warrants that the holder anticipated receiving from the Company, as described in the Pre-Funded Warrants.

Rights as a Stockholder. Except for the right to participate in certain dividends and distributions and as otherwise provided in the Pre-Funded Warrants or by virtue of a holder's ownership of our Common Stock, the holders of the Pre-Funded Warrants do not have the rights or privileges of holders of our Common Stock, including any voting rights, until they exercise their warrants.

Waivers and Amendments. Any term of the Pre-Funded Warrants may be amended or waived with our written consent and the written consent of the holder of such Pre-Funded Warrant.

No Fractional Shares. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of the Pre-Funded Warrants. As to any fraction of a share which the holder would otherwise be entitled to purchase upon such exercise, we shall cause the warrant agent to, at our option, pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the exercise price of the Pre-Funded Warrant per whole share or round such fractional share up to the nearest whole share.

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, any prospectus supplement and the other documents we have filed with the SEC that are incorporated herein by reference, contain forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, including statements regarding our strategy, future operations, future financial position, future revenues, projected costs, prospects, plans and objectives of management, are forward-looking statements. The words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue," and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. In particular, you should consider the numerous risks described in our Annual Report on Form 10-K for the year ended December 31, 2019 and any subsequent Quarterly Reports on Form 10-Q, each incorporated by reference in this prospectus supplement, and in the "Risk Factors" section in any applicable prospectus supplement. See "Where You Can Find More Information."

Although we believe the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, level of activity, performance or achievements. You should not rely upon forward-looking statements as predictions of future events. Unless required by law, we will not undertake and we specifically disclaim any obligation to release publicly the result of any revisions which may be made to any forward-looking statements to reflect events or circumstances after the date of such statements or to reflect the occurrence of events, whether or not anticipated. In that respect, we wish to caution readers not to place undue reliance on any such forward-looking statements, which speak only as of the date they are made.

This prospectus supplement and the other documents incorporated by reference herein include statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties. Industry publications and third party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. While we believe these industry publications and third party research, surveys and studies are reliable, we have not independently verified such data.

These risks and uncertainties include, among other things:

- our expectations regarding the potential market size and size of the potential patient populations for SLATE, GRANITE and any future product candidates, if approved for commercial use;
- our clinical and regulatory development plans for our product candidates;
- our expectations with regard to our Gritstone EDGETM platform, including our ability to utilize the platform to predict the TSNA that will be presented on a patient's tumor cells and identify shared antigens for other therapeutic classes;
- our expectations with regard to the data to be derived in our Phase 1/2 clinical trials or any clinical trials for other product candidates;
- the timing of commencement of future nonclinical studies and clinical trials and research and development programs;
- our ability to acquire, discover, develop and advance product candidates into, and successfully complete, clinical trials;
- our intentions and our ability to establish collaborations and/or partnerships;
- the timing or likelihood of regulatory filings and approvals for our product candidates;

- our commercialization, marketing and manufacturing capabilities and expectations;
- our intentions with respect to the commercialization of our product candidates;
- the pricing and reimbursement of our product candidates, if approved;
- the implementation of our business model and strategic plans for our business, product candidates and technology platforms, including additional indications for which we may pursue;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates, including the projected terms of patent protection;
- estimates of our expenses, future revenue, capital requirements, our needs for additional financing and our ability to obtain additional capital;
- · our future financial performance; and
- · developments and projections relating to our competitors and our industry, including competing therapies and procedures.

USE OF PROCEEDS

The selling stockholders will receive all of the net proceeds from sales of the Common Stock pursuant to this prospectus supplement. However, in the case of Pre-Funded Warrants issued to the selling stockholders pursuant to the applicable Purchase Agreements, upon any exercise of the Pre-Funded Warrants for cash, the selling stockholders will pay us an exercise price of \$0.01 per share of Common Stock, subject to any adjustment pursuant to the terms of the Pre-Funded Warrants. We expect to use any such proceeds for working capital and other general corporate purposes.

SELLING STOCKHOLDERS

Pursuant to the Purchase Agreements, we agreed to file the registration statement of which this prospectus supplement is a part to cover the resale of the shares of our Common Stock and the shares underlying the Pre-Funded Warrants, and to keep such registration statement effective with respect to each selling stockholder until the date on which all of the shares of our Common Stock registered for resale under the registration statement have been disposed of in accordance with such registration statement, disposed of pursuant to Rule 144 under the Securities Act, or can be resold pursuant to Rule 144 without restriction or limitation (including without any limitation as to volume of sales and without the selling stockholder complying with any method of sale requirements or notice requirements under Rule 144). The shares issuable upon exercise of the Pre-Funded Warrants will become eligible for sale by the selling stockholders under this prospectus supplement only when the Pre-Funded Warrants are exercised. We cannot predict when or whether any of the selling stockholders will exercise their Pre-Funded Warrants.

We are registering the resale of the above-referenced shares to permit each of the selling stockholders identified below, or their permitted transferees or other successors-in-interest that may be identified in a supplement to this prospectus supplement or, if required, a post-effective amendment to the registration statement of which this prospectus supplement is a part, to resell or otherwise dispose of the shares in the manner contemplated under "Plan of Distribution" in this prospectus supplement (as may be supplemented and amended). This prospectus supplement covers the sale or other disposition by the selling stockholders of up to the total number of shares of Common Stock that may be issued to the selling stockholders pursuant to the Purchase Agreement, plus the total number of shares of Common Stock issuable upon exercise of the Pre-Funded Warrants issued to the selling stockholders. Throughout this prospectus supplement, when we refer to the shares of our Common Stock being registered on behalf of the selling stockholders, we are referring to the shares of our Common Stock and the shares underlying the Pre-Funded Warrants issued to the selling stockholders pursuant to the Purchase Agreement, and when we refer to the selling stockholders in this prospectus supplement, we are referring to the purchasers under the Purchase Agreement and, as applicable, their permitted transferees or other successors-in-interest that may be identified in a supplement to this prospectus supplement or, if required, a post-effective amendment to the registration statement of which this prospectus supplement is a part.

The selling stockholders may sell some, all or none of their shares. We do not know how long the selling stockholders will hold the shares before selling them, and we currently have no agreements, arrangements or understandings with the selling stockholders regarding the sale or other disposition of any of the shares. The shares of our Common Stock covered hereby may be offered from time to time by the selling stockholders.

When we refer to "selling stockholders" in this prospectus supplement, we mean those persons listed in the table below, as well as their transferees, pledgees or donees or their successors. The information regarding shares beneficially owned after the offering assumes the sale of all shares offered by the selling stockholders. To our knowledge, subject to community property laws where applicable, each person named in the table has sole voting and investment power with respect to the shares of Common Stock set forth opposite such person's name.

The following table sets forth the name of each selling stockholder, the number and percentage of our Common Stock beneficially owned by the selling stockholders as of December 31, 2020, the number of shares of our Common Stock that may be offered under this prospectus supplement, and the number and percentage of our Common Stock beneficially owned by the selling stockholders assuming all of the shares of our Common Stock registered hereunder are sold. Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to our Common Stock. Generally, a person "beneficially owns" shares of our Common Stock if the person has or shares with others the right to vote those shares or to dispose of them, or if the person has the right to acquire voting or disposition rights within 60 days. The number of shares of our Common Stock in the column "Number of Shares Offered" represents all of the shares of our Common Stock that a selling stockholder may offer and sell from time to time under this prospectus supplement. For certain selling stockholders, the number of shares of Common Stock into which the Pre-Funded Warrants beneficially

held by such selling stockholder are exercisable are limited pursuant to the terms of the Pre-Funded Warrants to a number of shares of Common Stock which would result in such selling stockholder having aggregate individual beneficial ownership of the total issued and outstanding shares of Common Stock over specified percentage thresholds (collectively, referred to as the "Beneficial Ownership Limitation").

	Prior to Offering			After Offering		
Name	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned	Number of Shares Offered	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned	
Entities Affiliated with Redmile Group, LLC(1)	4,938,163	9.9%	15,060,000	3,059,794	4.7%	
Entities Affiliated with EcoR1 Capital, LLC(2)	4,898,042	9.9%	8,982,035	_	— %	
Entities Affiliated with Avidity Partners						
Management LP(3)	5,042,240	9.9%	8,982,035	_	— %	
Entities Affiliated with BVF Partners L.P. (4)	2,695,418	5.7%	2,695,418	_	— %	
Entities Affiliated with Versant Venture						
Management, LLC (5)	4,450,638	9.4%	1,347,709	3,102,929	6.5%	

- Consists of (i) 84,165 shares of Common Stock and 35,913 shares of Common Stock issuable upon the exercise of warrants held by Map 20 Segregated Portfolio, a segregated portfolio of LMA SPC, (ii) 352,647 shares of Common Stock and 112,366 shares of Common Stock issuable upon the exercise of warrants held by Redmile Biopharma Investments I, L.P., (iii) 573,155 shares of Common Stock and 197,466 shares of Common Stock issuable upon the exercise of warrants held by Redmile Capital Fund, LP, (iv) 41,500 shares of Common Stock and 18,771 shares of Common Stock issuable upon the exercise of warrants held by Redmile Capital Offshore Fund (ERISA), Ltd., (v) 682,126 shares of Common Stock and 244,575 shares of Common Stock issuable upon the exercise of warrants held by Redmile Capital Offshore II Master Fund, Ltd., (vi) 888,793 shares of Common Stock and 403,475 shares of Common Stock issuable upon the exercise of warrants held by Redmile Capital Offshore Master Fund, Ltd., (vii) 150,908 shares of Common Stock and 356,042 shares of Common Stock issuable upon the exercise of warrants held by Redmile Strategic Master Fund, LP, (viii) 500,075 shares of Common Stock issuable upon the exercise of warrants held by RedCo I, L.P. and (ix) 286,500 shares of Common Stock held by a separately managed account. Redmile Group, LLC is the investment manager/adviser to each of the private investment vehicles listed in items (i) through (ix) (collectively, the "Redmile Funds") and, in such capacity, exercises sole voting and investment power over all of the securities held by the Redmile Funds and may be deemed to be the beneficial owner of these securities. Jeremy C. Green serves as the managing member of Redmile Group, LLC and also may be deemed to be the beneficial owner of these shares. Redmile Group, LLC and Mr. Green each disclaim beneficial ownership of these shares, except to the extent of its or his pecuniary interest in such shares, if any. Excludes an aggregate of 13,181,631 shares of Common Stock issuable upon the exercise of the warrants described above, which are not exercisable within 60 days of December 31, 2020 by virtue of the beneficial ownership limitation described below. The number of shares of Common Stock into which the warrants are convertible is limited to that number of shares of Common Stock which would result in the stockholders, together with its affiliates, having an aggregate beneficial ownership of no more than 9.99% of the total issued and outstanding shares of Common Stock. The address of the Redmile Funds is c/o Redmile Group, LLC One Letterman Drive, Building D, Suite D3-300, San Francisco, California 94129.
- (2) Consists of (i) 534,405 shares of Common Stock and 230,669 shares of Common Stock issuable upon the exercise of warrants held by EcoR1 Capital Fund, L.P. ("Capital Fund") and (ii) 2,886,882 shares of Common Stock and 1,246,086 shares of Common Stock issuable upon the exercise of warrants held by EcoR1 Capital Fund Qualified, L.P. ("Qualified Fund"). EcoR1 Capital, LLC ("EcoR1") is the general partner of Capital Fund and Qualified Fund. Oleg Nodelman is the control person of EcoR1 and may be

- deemed to share voting and dispositive power over the shares held by Capital Fund and Qualified Fund. Excludes an aggregate of 4,083,993 shares of Common Stock issuable upon the exercise of warrants, which are not exercisable within 60 days of December 31, 2020 by virtue of the beneficial ownership limitation described below. The number of shares of Common Stock into which the warrants are convertible is limited to that number of shares of Common Stock which would result in the stockholders, together with its affiliates, having an aggregate beneficial ownership of no more than 9.99% of the total issued and outstanding shares of Common Stock. The address of the above person and entities is 357 Tehama Street #3, San Francisco, CA 94103.
- (3) Consists of (i) 1,926,834 shares of Common Stock and 2,651,520 shares of Common Stock issuable upon the exercise of warrants held by Avidity Master Fund LP, and (ii) 195,230 shares of Common Stock and 268,656 shares of Common Stock issuable upon the exercise of warrants held by Avidity Capital Fund II LP. Excludes an aggregate of 3,939,795 shares of Common Stock issuable upon the exercise of warrants, which are not exercisable within 60 days of December 31, 2020 by virtue of the beneficial ownership limitation described below. The number of shares of Common Stock into which the warrants are convertible is limited to that number of shares of Common Stock which would result in the stockholders, together with its affiliates, having an aggregate beneficial ownership of no more than 9.99% of the total issued and outstanding shares of Common Stock. The address of the above persons and entities is 2828 N. Harwood St., Suite 1220, Dallas, TX 75201.
- (4) Consists of 1,425,433 shares of Common Stock held of record by Biotechnology Value Fund, L.P. ("BVF"), 1,049,254 shares of Common Stock held of record by Biotechnology Value Fund II, L.P. ("BVF2"), 172,282 shares of Common Stock held of record by Biotechnology Value Trading Fund OS LP ("Trading Fund OS"), and 48,449 shares of Common Stock held of record by MSI BVF SPV L.L.C. BVF I GP LLC ("BVF GP"), as the general partner of BVF, may be deemed to beneficially own the 1,425,433 Shares beneficially owned by BVF. BVF II GP LLC ("BVF2 GP"), as the general partner of BVF2, may be deemed to beneficially own the 1,049,254 Shares beneficially owned by BVF2. BVF Partners OS Ltd. ("Partners OS"), as the general partner of Trading Fund OS, may be deemed to beneficially own the 172,282 Shares beneficially owned by Trading Fund OS. BVF GP Holdings LLC ("BVF GPH"), as the sole member of each of BVF GP and BVF2 GP, may be deemed to beneficially own the 2,474,687 Shares beneficially owned in the aggregate by BVF and BVF2. BVF Partners LP ("Partners"), as the general partner of BVF and BVF2, the sole member of Partners OS, and the investment manager of Trading Fund OS and MSI BVF SPV L.L.C., may be deemed to beneficially own the 2,695,418 Shares beneficially owned by Partners. Mark Lampert, as a director and officer of BVF Inc. may be deemed to beneficially own the 2,695,418 Shares beneficially owned by BVF Inc. The address of the above persons and entities is 44 Montgomery Street, 40th Floor, San Francisco CA 94104.
- Consists of (i) 2,723,031 shares of Common Stock held by Versant Venture Capital V, L.P. ("VVC V"), (ii) 207,234 shares of Common Stock held by Versant Venture Capital V (Canada) LP ("VVC CAN"), (iii) 90,756 shares of Common Stock held by Versant Ophthalmic Affiliates Fund I, L.P. ("VOA"), (iv) 81,908 shares of Common Stock held by Versant Affiliates Fund V, L.P. ("VAF V"), and (v) 1,347,709 shares of Common Stock held by Versant Vantage I, L.P. ("VV I" and together with VVC V, VVC CAN, VOA and VAF V, the "Versant Entities"). Versant Ventures V, LLC ("VV V") is the sole general partner of VVC V, VAF V and VOA. Samuel D. Colella ("Colella"), William J. Link ("Link"), Bradley Bolzon, Ph.D ("Bolzon"), Jerel Davis ("Davis"), Kirk G. Nielsen ("Nielsen"), Thomas Woiwode ("Woiwode") and Robin L. Praeger ("Praeger") are managing directors of VV V. Versant Ventures V GP-GP (Canada), Inc. ("VV V CAN GP") is the sole general partner of Versant Ventures V (Canada), L.P. ("VV V CAN") and VV V CAN is the sole general partner of VVC CAN... Colella, Link, Bolzon, Davis, Praeger, Nielsen and Woiwode are directors of VV V CAN GP. Versant Vantage I GP-GP, LLC ("VV I GP-GP") is the sole general partner of Versant Reporting Persons") and VV I GP is the sole general partner of VV I. Bolzon, Davis, Praeger, Ozawa and Woiwode are managing directors of VV I GP-GP. Colella, Link, Bolzon, Davis, Praeger, Nielsen, Ozawa and Woiwode

may be deemed to share voting and investment power over the shares of our Common Stock held by the Versant Entities, and disclaim beneficial ownership of all such shares except to the extent of their pecuniary interest therein. The address for each of the Versant Reporting Persons is One Sansome Street, Suite 3630, San Francisco, CA 94104.

PLAN OF DISTRIBUTION

The selling stockholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling shares of Common Stock previously issued and the shares of Common Stock issuable upon exercise of the Pre-Funded Warrants or interests in shares of Common Stock received after the date of this prospectus supplement from a selling stockholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of Common Stock or interests in shares of Common Stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. The selling stockholders may sell their shares of our Common Stock pursuant to this prospectus supplement at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- · privately negotiated transactions;
- short sales effected after the date the registration statement of which this prospectus supplement is a part is declared effective by the SEC;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- · a combination of any such methods of sale; and
- any other method permitted by applicable law.

If the selling stockholders effect such transactions by selling shares of Common Stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling stockholders or commissions from purchasers of the shares of Common Stock for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved).

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of Common Stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of Common Stock, from time to time, under this prospectus supplement, or under an amendment to this prospectus supplement under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus supplement. The selling stockholders also may transfer the shares of Common Stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus supplement.

In connection with the sale of our Common Stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of our Common Stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of our Common Stock short and deliver these securities to close out their short positions, or loan or pledge our Common Stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered under this prospectus supplement, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus supplement (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of the Common Stock offered by them will be the purchase price of the Common Stock less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of Common Stock to be made directly or through agents. We will not receive any of the proceeds from this offering. However, upon any exercise of the Pre-Funded Warrants by payment of cash, we will receive the exercise price of the Pre-Funded Warrants.

The selling stockholders also may resell all or a portion of the shares of Common Stock in open market transactions in reliance upon Rule 144 under the Securities Act, provided that they meet the criteria and conform to the requirements of that rule. In addition, the selling stockholders may transfer the shares of Common Stock by other means not described in this prospectus supplement.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the Common Stock or interests therein may be "underwriters" within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act. Selling stockholders who are "underwriters" within the meaning of Section 2(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act.

To the extent required, the shares of our Common Stock to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus supplement.

In order to comply with the securities laws of some states, if applicable, the Common Stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the Common Stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M under the Securities Exchange Act of 1934, as amended (the "Exchange Act") may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. In addition, to the extent applicable we will make copies of this prospectus supplement (as it may be supplemented or amended from time to time) available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

Once sold under the registration statement of which this prospectus supplement forms a part, the shares of Common Stock will be freely tradable in the hands of persons other than our affiliates.

We have agreed to indemnify the selling stockholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered under this prospectus supplement.

We will pay all expenses of the registration of the shares of Common Stock, including, without limitation, SEC filing fees. We have agreed with the selling stockholders to keep the registration statement of which this prospectus supplement constitutes a part effective until such time as the shares offered by the selling stockholders have been effectively registered under the Securities Act and disposed of in accordance with such registration statement, the shares offered by the selling stockholders have been disposed of pursuant to Rule 144 under the Securities Act or the shares offered by the selling stockholders may be resold pursuant to Rule 144 without restriction or limitation (including without any limitation as to volume of sales and without the selling stockholder complying with any method of sale requirements or notice requirements under Rule 144).

LEGAL MATTERS

The validity of the issuance and sale of the securities offered hereunder will be passed upon for us by Latham & Watkins LLP, Menlo Park, California.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2019, as set forth in their report which is incorporated by reference in this prospectus supplement and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus supplement is part of a registration statement we filed with the SEC. This prospectus supplement does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the Common Stock that may be offered under this prospectus supplement, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. Neither we nor any agent, underwriter or dealer has authorized any person to provide you with different information. No offer of Common Stock is being made in any state where the offer is not permitted. You should not assume that the information in this prospectus supplement is accurate as of any date other than the date on the front page of this prospectus supplement, regardless of the time of delivery of this prospectus supplement or any sale of Common Stock offered under this prospectus supplement.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy statements and other information regarding issuers that file electronically with the SEC, including us. The address of the SEC website is www.sec.gov.

We maintain a website at www.gritstone.com. Information contained in, or accessible through, our website is not a part of, and is not incorporated into, this prospectus supplement, and you should not consider it part of this prospectus supplement.

INCORPORATION OF DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus supplement the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus supplement, and information in documents that we file later with the SEC will automatically update and supersede information in this prospectus supplement. We incorporate by reference into this prospectus supplement the documents listed below and any future filings made by us with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, except for information "furnished" under Items 2.02, 7.01 or 9.01 on Form 8-K or other information "furnished" to the SEC which is not deemed filed and not incorporated in this prospectus supplement, until the termination of the offering of securities described in the applicable prospectus supplement. We hereby incorporate by reference the following documents:

- Our Annual Report on Form 10-K for the year ended December 31, 2019, filed with the SEC on March 11, 2020.
- The information specifically incorporated by reference into our Annual Report on Form 10-K from our <u>Definitive Proxy Statement on Schedule 14A</u>, filed with the SEC on April 24, 2020.

- Our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2020, June 30, 2020 and September 30, 2020, filed with the SEC on May 7, 2020, August 5, 2020 and November 5, 2020, respectively.
- Our Current Reports on Form 8-K filed with the SEC on <u>January 13, 2020</u>, <u>May 1, 2020</u>, <u>June 19, 2020</u>, <u>July 13, 2020</u>, <u>October 23, 2020</u>, <u>December 4, 2020</u>, <u>December 28, 2020</u>, <u>December 30, 2020</u> and <u>January 22, 2021</u>.
- The description of our Common Stock contained in our registration statement on <u>Form 8-A</u> filed with the SEC on September 18, 2018, including any amendments or reports filed with the SEC for the purposes of updating this description.

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus supplement will be deemed modified, superseded or replaced for purposes of this prospectus supplement to the extent that a statement contained in this prospectus supplement modifies, supersedes or replaces such statement.

You may request a free copy of any of the documents incorporated by reference in this prospectus supplement by writing or telephoning us at the following address:

Gritstone Oncology, Inc. 5959 Horton Street, Suite 300 Emeryville, California 94608 (510) 871-6100 Attention: Investor Relations

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this prospectus supplement or any accompanying prospectus supplement.

PROSPECTUS



GRITSTONE ONCOLOGY, INC.

Common Stock Preferred Stock Debt Securities Warrants Units

We, or the selling securityholders, may offer and sell the securities identified above, in each case from time to time in one or more offerings. This prospectus provides you with a general description of the securities. Unless otherwise set forth in a prospectus supplement, we will not receive any proceeds from the sale of our securities by the selling securityholders.

Each time we or any of the selling securityholders offer and sell securities, we or such selling securityholders will provide a supplement to this prospectus that contains specific information about the offering and, if applicable, the selling securityholders, as well as the amounts, prices and terms of the securities. The supplement may also add, update or change information contained in this prospectus with respect to that offering. You should carefully read this prospectus and the applicable prospectus supplement before you invest in any of our securities.

We or the selling securityholders may offer and sell the securities described in this prospectus and any prospectus supplement to or through one or more underwriters, dealers and agents, or directly to purchasers, or through a combination of these methods. If any underwriters, dealers or agents are involved in the sale of any of the securities, their names and any applicable purchase price, fee, commission or discount arrangement between or among them will be set forth, or will be calculable from the information set forth, in the applicable prospectus supplement. See the sections of this prospectus entitled "About this Prospectus" and "Plan of Distribution" for more information. No securities may be sold without delivery of this prospectus and the applicable prospectus supplement describing the method and terms of the offering of such securities.

INVESTING IN OUR SECURITIES INVOLVES RISKS. SEE THE "RISK FACTORS" ON PAGE 5 OF THIS PROSPECTUS AND ANY SIMILAR SECTION CONTAINED IN THE APPLICABLE PROSPECTUS SUPPLEMENT CONCERNING FACTORS YOU SHOULD CONSIDER BEFORE INVESTING IN OUR SECURITIES.

Our common stock is listed on the Nasdaq Global Select Market under the symbol "GRTS." On January 28, 2021, the last reported sale price of our common stock on the Nasdaq Global Select Market was \$17.16 per share.

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

The date of this prospectus is January 29, 2021.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the U.S. Securities and Exchange Commission, or the SEC, as a "well-known seasoned issuer" as defined in Rule 405 under the Securities Act of 1933, as amended, using a "shelf" registration process. By using a shelf registration statement, we or the selling securityholders may sell securities from time to time and in one or more offerings. Each time that we or the selling securityholders offer and sell securities, we or the selling securityholders will provide a prospectus supplement to this prospectus that contains specific information about the securities being offered and sold and the specific terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. The prospectus supplement or free writing prospectus may also add, update or change information contained in this prospectus with respect to that offering. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement or free writing prospectus, as applicable. Before purchasing any securities, you should carefully read both this prospectus and the applicable prospectus supplement (and any applicable free writing prospectuses), together with the additional information described under the heading "Where You Can Find More Information; Incorporation by Reference."

Neither we, nor the selling securityholders, have authorized anyone to provide you with any information or to make any representations other than those contained in this prospectus, any applicable prospectus supplement or any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We and the selling securityholders take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the selling securityholders will not make an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus and the applicable prospectus supplement to this prospectus is accurate only as of the date on its respective cover, that the information appearing in any applicable free writing prospectus is accurate only as of the date of that free writing prospectus, and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, unless we indicate otherwise. Our business, financial condition, results of operations and prospects may have changed since those dates. This prospectus incorporates by reference, and any prospectus supplement or free writing prospectus may contain and incorporate by reference, market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. In addition, the market and industry data and forecasts that may be included or incorporated by reference in this prospectus, any prospectus supplement or any applicable free writing prospectus may involve estimates, assumptions and other risks and uncertainties and are subject to change based on various factors, including those discussed under the heading "Risk Factors" contained in this prospectus, the applicable prospectus supplement and any applicable free writing prospectus, and under similar headings in other documents that are incorporated by reference into this prospectus. Accordingly, investors should not place undue reliance on this information.

When we refer to "*Gritstone*," "we," "our," "us" and the "Company" in this prospectus, we mean Gritstone Oncology, Inc. and its consolidated subsidiaries, unless otherwise specified. When we refer to "you," we mean the potential holders of the applicable series of securities.

Gritstone OncologyTM, GritstoneTM, Gritstone EDGETM, GRANITETM, SLATETM and our logo are some of our trademarks used in this prospectus. This prospectus also includes trademarks, tradenames, and service marks that are the property of other organizations. Solely for convenience, our trademarks and tradenames referred to in this prospectus appear without the $^{\circledR}$ or TM symbol, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights, or the right of the applicable licensor to these trademarks and tradenames.

WHERE YOU CAN FIND MORE INFORMATION; INCORPORATION BY REFERENCE

Available Information

We file reports, proxy statements and other information with the SEC. The SEC maintains a web site that contains reports, proxy and information statements and other information about issuers, such as us, who file electronically with the SEC. The address of that website is http://www.sec.gov.

Our web site address is www.gritstoneoncology.com. The information on our web site, however, is not, and should not be deemed to be, a part of this prospectus.

This prospectus and any prospectus supplement are part of a registration statement that we filed with the SEC and do not contain all of the information in the registration statement. The full registration statement may be obtained from the SEC or us, as provided below. Forms of the indenture and other documents establishing the terms of the offered securities are or may be filed as exhibits to the registration statement or documents incorporated by reference in the registration statement. Statements in this prospectus or any prospectus supplement about these documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should refer to the actual documents for a more complete description of the relevant matters. You may inspect a copy of the registration statement through the SEC's website, as provided above.

Incorporation by Reference

The SEC's rules allow us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, and subsequent information that we file with the SEC will automatically update and supersede that information. Any statement contained in this prospectus or a previously filed document incorporated by reference will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or a subsequently filed document incorporated by reference modifies or replaces that statement.

This prospectus and any accompanying prospectus supplement incorporate by reference the documents set forth below that have previously been filed with the SEC:

- Our Annual Report on Form 10-K for the year ended December 31, 2019, filed with the SEC on March 11, 2020.
- The information specifically incorporated by reference into our Annual Report on Form 10-K from our <u>Definitive Proxy Statement on Schedule 14A</u>, filed with the SEC on April 24, 2020.
- Our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2020, June 30, 2020 and September 30, 2020, filed with the SEC on May 7, 2020, August 5, 2020 and November 5, 2020, respectively.
- Our Current Reports on Form 8-K filed with the SEC on <u>January 13, 2020</u>, <u>May 1, 2020</u>, <u>June 19, 2020</u>, <u>July 13, 2020</u>, <u>October 23, 2020</u>, <u>December 4, 2020</u>, <u>December 28, 2020</u>, <u>December 30, 2020</u> and <u>January 22, 2021</u>.
- The description of our common stock contained in our registration statement on <u>Form 8-A</u> filed with the SEC on September 18, 2018, including any amendments or reports filed with the SEC for the purposes of updating this description.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, which we refer to as the "Exchange Act" in this prospectus, prior to the termination of this offering, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents.

You may request a free copy of any of the documents incorporated by reference in this prospectus by writing or telephoning us at the following address:

Gritstone Oncology, Inc. 5959 Horton Street, Suite 300 Emeryville, California 94608 (510) 871-6100 Attention: Investor Relations

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this prospectus or any accompanying prospectus supplement.

THE COMPANY

We are a biotechnology company developing tumor-specific cancer immunotherapies to fight multiple cancer types.

We were founded in August 2015 as a Delaware corporation. Our principal executive offices are located at 5959 Horton Street, Suite 300, Emeryville, California 94608, and our telephone number is (510) 871-6100. Our website address is www.gritstoneoncology.com. The information on, or that can be accessed through, our website is not part of this prospectus. We have included our website address as an inactive textual reference only.

RISK FACTORS

Investment in any securities offered pursuant to this prospectus and the applicable prospectus supplement involves risks. You should carefully consider the risk factors incorporated by reference to our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, and all other information contained or incorporated by reference into this prospectus, as updated by our subsequent filings under the Exchange Act, and the risk factors and other information contained in the applicable prospectus supplement and any applicable free writing prospectus before acquiring any of such securities. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

USE OF PROCEEDS

We intend to use the net proceeds from the sale of the securities as set forth in the applicable prospectus supplement. Unless the applicable prospectus supplement provides otherwise, we will not receive any of the proceeds from the sale of our securities by selling securityholders.

DESCRIPTION OF CAPITAL STOCK

The following summary describes our capital stock and the material provisions of our amended and restated certificate of incorporation, our amended and restated bylaws, the amended and restated investors' rights agreement to which we and certain of our stockholders are parties and of the Delaware General Corporation Law. Because the following is only a summary, it does not contain all of the information that may be important to you. For a complete description, you should refer to our amended and restated certificate of incorporation, amended and restated bylaws and amended and restated investor rights agreement, copies of which are incorporated by reference as exhibits to the registration statement of which this prospectus is a part.

General

As of September 30, 2020, our authorized capital stock consists of 300,000,000 shares of common stock, \$0.0001 par value per share, and 10,000,000 shares of preferred stock, \$0.0001 par value per share. As of September 30, 2020, there were outstanding:

- 37,763,266 shares of our common stock held by approximately 35 stockholders of record; and
- 4,491,467 shares of our common stock issuable upon exercise of outstanding stock options.

The actual number of stockholders is greater than the number of record holders and includes stockholders who are beneficial owners but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

The following description of our capital stock and provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries of material terms and provisions and are qualified by reference to our amended and restated certificate of incorporation and amended and restated bylaws, copies of which have been filed with the SEC and are incorporated by reference as exhibits to the registration statement of which this prospectus is a part.

Common Stock

Voting Rights

Each holder of our common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Our stockholders do not have cumulative voting rights in the election of directors. Accordingly, holders of a majority of the voting shares are able to elect all of the directors. In addition, the affirmative vote of holders of 66-2/3% of the voting power of all of the then outstanding voting stock is required to take certain actions, including amending certain provisions of our amended and restated certificate of incorporation, such as the provisions relating to amending our amended and restated bylaws, the classified board and director liability.

Dividends

Subject to preferences that may be applicable to any then outstanding preferred stock, holders of our common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then outstanding shares of preferred stock.

Rights and Preferences

Holders of our common stock have no preemptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of our preferred stock that we may designate in the future.

Preferred Stock

Our board of directors has the authority, without further action by our stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting, or the designation of, such series, any or all of which may be greater than the rights of common stock. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change in control of our company or other corporate action. As of September 30, 2020, no shares of preferred stock are outstanding.

Options

As of September 30, 2020, we had outstanding options to purchase 4,491,467 shares of our common stock, with a per share weighted-average exercise price of \$8.08, under our 2015 Equity Incentive Plan and 2018 Equity Incentive Plan.

Warrants

In December 2020, we issued and sold, in a private placement transaction, warrants to purchase 27,480,719 shares of our common stock, with a per share weighted average exercise price of \$3.34 per share of Common Stock, of which \$3.33 per share was paid by each holder of such warrants at the time of purchase (such warrants, the "Pre-Funded Warrants").

The material terms and provisions of the Pre-Funded Warrants to purchase shares of Common Stock are summarized below. This summary is subject to and qualified in its entirety by the form of pre-funded warrant, which was filed with the SEC as an exhibit to the Company's Form 8-K on December 28, 2020.

Exercisability. The holder may exercise the Pre-Funded Warrants at any time. There is no expiration date for the Pre-Funded Warrants. Notwithstanding the foregoing, certain holders will be prohibited from exercising such warrants into shares of our common stock if, as a result of such exercise, the holder, together with its affiliates, would own more than 9.99% of the total number of shares of our common stock then issued and outstanding. The Pre-Funded Warrants are exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below).

Exercise Price. The exercise price of each Pre-Funded Warrant is \$3.34 per share of Common Stock, of which \$3.33 per share was paid by each purchaser of Pre-Funded Warrants at time of purchase. The exercise price of the warrants is subject to appropriate adjustment in the event of stock dividends, subdivisions, stock splits, stock combinations, reclassifications or reorganizations affecting our common stock.

Payment of Exercise Price. The warrant holders have the option to provide payment of the exercise price of the shares being acquired upon exercise of the warrants (i) by wire transfer or cashier's check, or, in certain circumstances as described below (ii) by cashless exercise.

Cashless Exercise. If at any time there is no effective resale registration statement registering the resale of the Pre-Funded Warrants, in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise the net number of shares of common stock determined according to a formula set forth in the Pre-Funded Warrants.

Transferability. Subject to applicable laws and the restriction on transfer set forth in the warrant agreement, the Pre-Funded Warrants may be transferred at the option of the holders upon surrender of the warrants to the warrant agent together with the appropriate instruments of transfer.

Change of Control Transactions. If, at any time while each Pre-Funded Warrant is outstanding, there is a Change of Control, which generally includes a merger or consolidation resulting in the sale of 50% or more of the voting securities of the Company, the sale of all or substantially all of the assets or voting securities of the Company, or other change of control transaction, then the holder has the right thereafter to receive, upon exercise of the Pre-Funded Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Change of Control if it had been, immediately prior to such Change of Control, the holder of the number of Warrant Shares then issuable upon exercise in full of the Pre-Funded Warrant (the "Alternate Consideration"). If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Change of Control, then the holder will be given the same choice as to the Alternate Consideration it receives upon any exercise of the Pre-Funded Warrants following such Change of Control.

Events of Failure. In the event that we fail to timely deliver shares of Common Stock to any holder, we are required to make whole any holder who purchases shares of Common Stock to deliver in satisfaction of a sale by such holder of shares of Common Stock issuable upon an exercise of the Pre-Funded Warrants that the holder anticipated receiving from the Company, as described in the Pre-Funded Warrants.

Rights as a Stockholder. Except for the right to participate in certain dividends and distributions and as otherwise provided in the Pre-Funded Warrants or by virtue of a holder's ownership of our common stock, the holders of the Pre-Funded Warrants do not have the rights or privileges of holders of our Common Stock, including any voting rights, until they exercise their warrants.

Waivers and Amendments. Any term of the Pre-Funded Warrants may be amended or waived with our written consent and the written consent of the holder of such Pre-Funded Warrant.

No Fractional Shares. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of the Pre-Funded Warrants. As to any fraction of a share which the holder would otherwise be entitled to purchase upon such exercise, we shall cause the warrant agent to, at our option, pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the exercise price of the Pre-Funded Warrant per whole share or round such fractional share up to the nearest whole share.

Registration Rights

Under our amended and restated investors' rights agreement, based on the number of shares outstanding as of September 30, 2020, the holders of approximately 3.1 million shares of common stock, or their transferees, have the right to require us to register their shares under the Securities Act so that those shares may be publicly resold, and the holders of approximately 8.8 million shares of common stock, or their transferees, have the right to include their shares in any registration statement we file, in each case as described below.

In addition, under our securities purchase agreements with certain purchasers of our common stock and pre-funded warrants, we agreed to file a resale registration statement with the Securities and Exchange Commission as soon as practicable, and in all events within 30 days after the applicable closing of the issue and sale of approximately 5.5 million shares of common stock, and Pre-Funded Warrants to purchase approximately 27.5 million shares of our common stock, in December 2020.

Registration Rights Under Investors Rights' Agreement

Demand Registration Rights

Based on the number of shares outstanding as of September 30, 2020, the holders of approximately 3.1 million shares of our common stock, or their transferees, are entitled to certain demand registration rights. The holders of at least 30% of these shares (or a lesser percent if the anticipated aggregate offering price to the public net of certain expenses would exceed \$10.0 million) can request that we register all or a portion of their shares. Additionally, we are not required to effect a demand registration during the period beginning 120 days prior to the filing and ending 180 days following the effectiveness of a company-initiated registration statement relating to a public offering of our securities.

Piggyback Registration Rights

Based on the number of shares outstanding as of September 30, 2020, in the event that we determine to register any of our securities under the Securities Act (subject to certain exceptions), either for our own account or for the account of other security holders, the holders of approximately 3.1 million shares of our common stock, or their transferees, are entitled to certain "piggyback" registration rights allowing the holders to include their shares in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to a registration related to employee benefit plans, the offer and sale of debt securities, or corporate reorganizations or certain other transactions, the holders of these shares are entitled to notice of the registration and have the right, subject to limitations that the underwriters may impose on the number of shares included in the registration, to include their shares in the registration. In an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to limit the number of shares such holders may include.

Form S-3 Registration Rights

Based on the number of shares outstanding as of September 30, 2020, the holders of approximately 3.1 million shares of our common stock, or their transferees, are entitled to certain Form S-3 registration rights. The holders of any of at least 30% of these shares can make a written request that we register their shares on Form S-3 if we are eligible to file a registration statement on Form S-3 and if the aggregate price to the public of the shares offered is at least \$10 million net of certain expenses related to the sale of the shares. These stockholders may make an unlimited number of requests for registration on Form S-3, but in no event shall we be required to file more than two registrations on Form S-3 in any given 12 month period. Additionally, we are not required to effect a

Form S-3 registration during the period beginning 30 days prior to the filing and ending 90 days following the effectiveness of a company-initiated registration statement relating to a public offering of our securities.

Expenses of Registration

We will pay the registration expenses of the holders of the shares registered pursuant to the demand, piggyback and Form S-3 registration rights described above, including the expenses of one counsel for the selling holders.

Expiration of Registration Rights

The demand, piggyback and Form S-3 registration rights described above will expire, with respect to any particular stockholder, upon the earlier of three years after the consummation of our initial public offering or when that stockholder can sell all of its shares under Rule 144 of the Securities Act during any three-month period.

Anti-Takeover Effects of Provisions of our Amended and Restated Certificate of Incorporation, our Amended and Restated Bylaws and Delaware Law

Some provisions of Delaware law and our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could make the following transactions more difficult: acquisition of

us by means of a tender offer; acquisition of us by means of a proxy contest or otherwise; or removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions that might result in a premium over the market price for our shares.

These provisions, summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Delaware Anti-Takeover Statute

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits persons deemed "interested stockholders" from engaging in a "business combination" with a publicly-held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation's voting stock. Generally, a "business combination" includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors, such as discouraging takeover attempts that might result in a premium over the market price of our common stock.

Undesignated Preferred Stock

The ability to authorize undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deterring hostile takeovers or delaying changes in control or management of our company.

Special Stockholder Meetings

Our amended and restated bylaws provide that a special meeting of stockholders may be called by our board of directors, or by our President or Chief Executive Officer.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Our amended and restated bylaws establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors.

Elimination of Stockholder Action by Written Consent

Our amended and restated certificate of incorporation and our amended and restated bylaws eliminate the right of stockholders to act by written consent without a meeting.

Classified Board; Election and Removal of Directors; Filling Vacancies

Our board of directors is divided into three classes. The directors in each class will serve for a three-year term, one class being elected each year by our stockholders, with staggered three-year terms. Only one class of

directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Because our stockholders do not have cumulative voting rights, our stockholders holding a majority of the shares of common stock outstanding will be able to elect all of our directors. Our amended and restated certificate of incorporation provides for the removal of any of our directors only for cause and requires a stockholder vote by the holders of at least a 66-2/3% of the voting power of the then outstanding voting stock. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of the board, may only be filled by a resolution of the board of directors unless the board of directors determines that such vacancies shall be filled by the stockholders. This system of electing and removing directors and filling vacancies may tend to discourage a third party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors.

Choice of Forum

Our amended and restated certificate of incorporation and our amended and restated bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware is the exclusive forum for: any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. The exclusive forum provision will not apply to suits brought to enforce any liability or duty created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. In addition, our amended and restated certificate of incorporation provides that the U.S. federal district courts are the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. Our exclusive forum provision will not relieve us of our duties to comply with the federal securities laws and the rules and regulations thereunder, and our stockholders will not be deemed to have waived our compliance with these laws, rules and regulations.

The enforceability of similar federal court choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find this type of provision to be inapplicable or unenforceable. If a court were to find either of the choice of forum provisions contained in our amended and restated certificate of incorporation or amended and restated bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions.

The choice of forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with the company or its directors, officers or other employees, which may discourage such lawsuits against the company and its directors, officers and other employees and result in increased costs for investors to bring a claim.

Amendment of Charter Provisions

The amendment of any of the above provisions, except for the provision making it possible for our board of directors to issue undesignated preferred stock, would require approval by a stockholder vote by the holders of at least a 66-2/3% of the voting power of the then outstanding voting stock. The provisions of the Delaware General Corporation Law, our amended and restated certificate of incorporation and our amended and restated bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Limitations of Liability and Indemnification Matters

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

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

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

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

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

Listing

Our common stock is listed on the Nasdaq Global Select Market under the symbol "GRTS."

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC. The transfer agent and registrar's address is 6201 15th Avenue, Brooklyn, New York 11219.

DESCRIPTION OF DEBT SECURITIES

The following description, together with the additional information we include in any applicable prospectus supplement or free writing prospectus, summarizes certain general terms and provisions of the debt securities that we may offer under this prospectus. When we offer to sell a particular series of debt securities, we will describe the specific terms of the series in a supplement to this prospectus. We will also indicate in the supplement to what extent the general terms and provisions described in this prospectus apply to a particular series of debt securities.

We may issue debt securities either separately, or together with, or upon the conversion or exercise of or in exchange for, other securities described in this prospectus. Debt securities may be our senior, senior subordinated or subordinated obligations and, unless otherwise specified in a supplement to this prospectus, the debt securities will be our direct, unsecured obligations and may be issued in one or more series.

The debt securities will be issued under an indenture between us and a third party to be identified therein, as trustee. We have summarized select portions of the indenture below. The summary is not complete. The form of the indenture has been filed as an exhibit to the registration statement and you should read the indenture for provisions that may be important to you. In the summary below, we have included references to the section numbers of the indenture so that you can easily locate these provisions. Capitalized terms used in the summary and not defined herein have the meanings specified in the indenture.

As used in this section only, "Gritstone," "we," "our" or "us" refer to Gritstone Oncology, Inc. excluding our subsidiaries, unless expressly stated or the context otherwise requires.

General

The terms of each series of debt securities will be established by or pursuant to a resolution of our board of directors and set forth or determined in the manner provided in a resolution of our board of directors, in an officer's certificate or by a supplemental indenture. (Section 2.2) The particular terms of each series of debt securities will be described in a prospectus supplement relating to such series (including any pricing supplement or term sheet).

We can issue an unlimited amount of debt securities under the indenture that may be in one or more series with the same or various maturities, at par, at a premium, or at a discount. (Section 2.1) We will set forth in a prospectus supplement (including any pricing supplement or term sheet) relating to any series of debt securities being offered the aggregate principal amount and the following terms of the debt securities, if applicable:

- the title and ranking of the debt securities (including the terms of any subordination provisions);
- the price or prices (expressed as a percentage of the principal amount) at which we will sell the debt securities;
- any limit on the aggregate principal amount of the debt securities;
- the date or dates on which the principal of the securities of the series is payable;
- the rate or rates (which may be fixed or variable) per annum or the method used to determine the rate or rates (including any commodity, commodity index, stock exchange index or financial index) at which the debt securities will bear interest, the date or dates from which interest will accrue, the date or dates on which interest will commence and be payable and any regular record date for the interest payable on any interest payment date;
- the place or places where principal of, and interest, if any, on, the debt securities will be payable (and the method of such payment), where the securities of such series may be surrendered for registration of transfer or exchange, and where notices and demands to us in respect of the debt securities may be delivered;

- the period or periods within which, the price or prices at which and the terms and conditions upon which we may redeem the debt securities:
- any obligation we have to redeem or purchase the debt securities pursuant to any sinking fund or analogous provisions or at the option of a holder of debt securities and the period or periods within which the price or prices at which and in the terms and conditions upon which securities of the series shall be redeemed or purchased, in whole or in part, pursuant to such obligation;
- the dates on which and the price or prices at which we will repurchase debt securities at the option of the holders of debt securities and other detailed terms and provisions of these repurchase obligations;
- the denominations in which the debt securities will be issued, if other than denominations of \$1,000 and any integral multiple thereof;
- whether the debt securities will be issued in the form of certificated debt securities or global debt securities;
- the portion of principal amount of the debt securities payable upon declaration of acceleration of the maturity date, if other than the principal amount;
- the currency of denomination of the debt securities, which may be United States Dollars or any foreign currency, and if such currency of denomination is a composite currency, the agency or organization, if any, responsible for overseeing such composite currency;
- the designation of the currency, currencies or currency units in which payment of principal of, and premium and interest on the debt securities will be made;
- if payments of principal of, or premium or interest on, the debt securities will be made in one or more currencies or currency units other than that or those in which the debt securities are denominated, the manner in which the exchange rate with respect to these payments will be determined:
- the manner in which the amounts of payment of principal of, or premium, if any, or interest on, the debt securities will be determined, if these amounts may be determined by reference to an index based on a currency or currencies or by reference to a commodity, commodity index, stock exchange index or financial index;
- any provisions relating to any security provided for the debt securities;
- any addition to, deletion of or change in the Events of Default described in this prospectus or in the indenture with respect to the debt securities and any change in the acceleration provisions described in this prospectus or in the indenture with respect to the debt securities;
- any addition to, deletion of or change in the covenants described in this prospectus or in the indenture with respect to the debt securities;
- any depositaries, interest rate calculation agents, exchange rate calculation agents or other agents with respect to the debt securities;
- the provisions, if any, relating to conversion or exchange of any debt securities of such series, including, if applicable, the conversion or exchange price and period, provisions as to whether conversion or exchange will be mandatory, the events requiring an adjustment of the conversion or exchange price and provisions affecting conversion or exchange;
- any other terms of the debt securities, which may supplement, modify or delete any provision of the indenture as it applies to that series, including any terms that may be required under applicable law or regulations or advisable in connection with the marketing of the securities; and
- whether any of our direct or indirect subsidiaries will guarantee the debt securities of that series, including the terms of subordination, if any, of such guarantees. (Section 2.2)

We may issue debt securities that provide for an amount less than their stated principal amount to be due and payable upon declaration of acceleration of their maturity pursuant to the terms of the indenture. We will provide you with information on the federal income tax considerations and other special considerations applicable to any of these debt securities in the applicable prospectus supplement.

If we denominate the purchase price of any of the debt securities in a foreign currency or currencies or a foreign currency unit or units, or if the principal of, and any premium and interest on, any series of debt securities is payable in a foreign currency or currencies or a foreign currency unit or units, we will provide you with information on the restrictions, elections, general tax considerations, specific terms and other information with respect to that issue of debt securities and such foreign currency or currencies or foreign currency unit or units in the applicable prospectus supplement.

Transfer and Exchange

Each debt security will be represented by either one or more global securities registered in the name of The Depository Trust Company, or the Depositary, or a nominee of the Depositary (we will refer to any debt security represented by a global debt security as a "book-entry debt security"), or a certificate issued in definitive registered form (we will refer to any debt security represented by a certificated security as a "certificated debt security") as set forth in the applicable prospectus supplement. Except as set forth under the heading "Global Debt Securities and Book-Entry System" below, bookentry debt securities will not be issuable in certificated form.

Certificated Debt Securities. You may transfer or exchange certificated debt securities at any office we maintain for this purpose in accordance with the terms of the indenture. (Section 2.4) No service charge will be made for any transfer or exchange of certificated debt securities, but we may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection with a transfer or exchange. (Section 2.7)

You may effect the transfer of certificated debt securities and the right to receive the principal of, and premium and interest on, certificated debt securities only by surrendering the certificate representing those certificated debt securities and either reissuance by us or the trustee of the certificate to the new holder or the issuance by us or the trustee of a new certificate to the new holder.

Global Debt Securities and Book-Entry System. Each global debt security representing book-entry debt securities will be deposited with, or on behalf of, the Depositary, and registered in the name of the Depositary or a nominee of the Depositary. Please see "Global Securities."

Covenants

We will set forth in the applicable prospectus supplement any restrictive covenants applicable to any issue of debt securities. (Article IV)

No Protection in the Event of a Change of Control

Unless we state otherwise in the applicable prospectus supplement, the debt securities will not contain any provisions which may afford holders of the debt securities protection in the event we have a change in control or in the event of a highly leveraged transaction (whether or not such transaction results in a change in control) which could adversely affect holders of debt securities.

Consolidation, Merger and Sale of Assets

We may not consolidate with or merge with or into, or convey, transfer or lease all or substantially all of our properties and assets to any person (a "successor person") unless:

- we are the surviving corporation or the successor person (if other than Gritstone) is a corporation organized and validly existing under the laws of any U.S. domestic jurisdiction and expressly assumes our obligations on the debt securities and under the indenture; and
- immediately after giving effect to the transaction, no Default or Event of Default, shall have occurred and be continuing.

Notwithstanding the above, any of our subsidiaries may consolidate with, merge into or transfer all or part of its properties to us. (Section 5.1)

Events of Default

"Event of Default" means with respect to any series of debt securities, any of the following:

- default in the payment of any interest upon any debt security of that series when it becomes due and payable, and continuance of such default for a period of 30 days (unless the entire amount of the payment is deposited by us with the trustee or with a paying agent prior to the expiration of the 30-day period);
- default in the payment of principal of any security of that series at its maturity;
- default in the performance or breach of any other covenant or warranty by us in the indenture (other than a covenant or warranty that has been included in the indenture solely for the benefit of a series of debt securities other than that series), which default continues uncured for a period of 60 days after we receive written notice from the trustee or Gritstone and the trustee receive written notice from the holders of not less than 25% in principal amount of the outstanding debt securities of that series as provided in the indenture;
- certain voluntary or involuntary events of bankruptcy, insolvency or reorganization of Gritstone;
- any other Event of Default provided with respect to debt securities of that series that is described in the applicable prospectus supplement.
 (Section 6.1)

No Event of Default with respect to a particular series of debt securities (except as to certain events of bankruptcy, insolvency or reorganization) necessarily constitutes an Event of Default with respect to any other series of debt securities. (Section 6.1) The occurrence of certain Events of Default or an acceleration under the indenture may constitute an event of default under certain indebtedness of ours or our subsidiaries outstanding from time to time.

We will provide the trustee written notice of any Default or Event of Default within 30 days of becoming aware of the occurrence of such Default or Event of Default, which notice will describe in reasonable detail the status of such Default or Event of Default and what action we are taking or propose to take in respect thereof. (Section 6.1)

If an Event of Default with respect to debt securities of any series at the time outstanding occurs and is continuing, then the trustee or the holders of not less than 25% in principal amount of the outstanding debt securities of that series may, by a notice in writing to us (and to the trustee if given by the holders), declare to be due and payable immediately the principal of (or, if the debt securities of that series are discount securities, that portion of the principal amount as may be specified in the terms of that series) and accrued and unpaid interest, if any, on all debt securities of that series. In the case of an Event of Default resulting from certain events of

bankruptcy, insolvency or reorganization, the principal (or such specified amount) of and accrued and unpaid interest, if any, on all outstanding debt securities will become and be immediately due and payable without any declaration or other act on the part of the trustee or any holder of outstanding debt securities. At any time after a declaration of acceleration with respect to debt securities of any series has been made, but before a judgment or decree for payment of the money due has been obtained by the trustee, the holders of a majority in principal amount of the outstanding debt securities of that series may rescind and annul the acceleration if all Events of Default, other than the non-payment of accelerated principal and interest, if any, with respect to debt securities of that series, have been cured or waived as provided in the indenture. (Section 6.2) We refer you to the prospectus supplement relating to any series of debt securities that are discount securities for the particular provisions relating to acceleration of a portion of the principal amount of such discount securities upon the occurrence of an Event of Default.

The indenture provides that the trustee may refuse to perform any duty or exercise any of its rights or powers under the indenture unless the trustee receives indemnity satisfactory to it against any cost, liability or expense which might be incurred by it in performing such duty or exercising such right or power. (Section 7.1(e)) Subject to certain rights of the trustee, the holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee with respect to the debt securities of that series. (Section 6.12)

No holder of any debt security of any series will have any right to institute any proceeding, judicial or otherwise, with respect to the indenture or for the appointment of a receiver or trustee, or for any remedy under the indenture, unless:

- that holder has previously given to the trustee written notice of a continuing Event of Default with respect to debt securities of that series;
- the holders of not less than 25% in principal amount of the outstanding debt securities of that series have made written request, and offered indemnity or security satisfactory to the trustee, to the trustee to institute the proceeding as trustee, and the trustee has not received from the holders of not less than a majority in principal amount of the outstanding debt securities of that series a direction inconsistent with that request and has failed to institute the proceeding within 60 days. (Section 6.7)

Notwithstanding any other provision in the indenture, the holder of any debt security will have an absolute and unconditional right to receive payment of the principal of, and premium and any interest on, that debt security on or after the due dates expressed in that debt security and to institute suit for the enforcement of payment. (Section 6.8)

The indenture requires us, within 120 days after the end of our fiscal year, to furnish to the trustee a statement as to compliance with the indenture. (Section 4.3) If a Default or Event of Default occurs and is continuing with respect to the securities of any series and if it is known to a responsible officer of the trustee, the trustee shall mail to each Securityholder of the securities of that series notice of a Default or Event of Default within 90 days after it occurs or, if later, after a responsible officer of the trustee has knowledge of such Default or Event of Default. The indenture provides that the trustee may withhold notice to the holders of debt securities of any series of any Default or Event of Default (except in payment on any debt securities of that series) with respect to debt securities of that series if the trustee determines in good faith that withholding notice is in the interest of the holders of those debt securities. (Section 7.5)

Modification and Waiver

We and the trustee may modify, amend or supplement the indenture or the debt securities of any series without the consent of any holder of any debt security:

to cure any ambiguity, defect or inconsistency;

- to comply with covenants in the indenture described above under the heading "Consolidation, Merger and Sale of Assets";
- to provide for uncertificated securities in addition to or in place of certificated securities;
- to add guarantees with respect to debt securities of any series or secure debt securities of any series;
- to surrender any of our rights or powers under the indenture;
- to add covenants or events of default for the benefit of the holders of debt securities of any series;
- to comply with the applicable procedures of the applicable depositary;
- to make any change that does not adversely affect the rights of any holder of debt securities;
- to provide for the issuance of and establish the form and terms and conditions of debt securities of any series as permitted by the indenture;
- to effect the appointment of a successor trustee with respect to the debt securities of any series and to add to or change any of the
 provisions of the indenture to provide for or facilitate administration by more than one trustee; or
- to comply with requirements of the SEC in order to effect or maintain the qualification of the indenture under the Trust Indenture Act. (Section 9.1)

We may also modify and amend the indenture with the consent of the holders of at least a majority in principal amount of the outstanding debt securities of each series affected by the modifications or amendments. We may not make any modification or amendment without the consent of the holders of each affected debt security then outstanding if that amendment will:

- reduce the amount of debt securities whose holders must consent to an amendment, supplement or waiver;
- reduce the rate of or extend the time for payment of interest (including default interest) on any debt security;
- reduce the principal of, or premium on, or change the fixed maturity of any debt security or reduce the amount of, or postpone the date fixed for, the payment of any sinking fund or analogous obligation with respect to any series of debt securities;
- reduce the principal amount of discount securities payable upon acceleration of maturity;
- waive a default in the payment of the principal of, or premium or interest on, any debt security (except a rescission of acceleration of the debt securities of any series by the holders of at least a majority in aggregate principal amount of the then outstanding debt securities of that series and a waiver of the payment default that resulted from such acceleration);
- make the principal of, or premium or interest on, any debt security payable in currency other than that stated in the debt security;
- make any change to certain provisions of the indenture relating to, among other things, the right of holders of debt securities to receive payment of the principal of, and premium and interest on, those debt securities and to institute suit for the enforcement of any such payment and to waivers or amendments; or
- waive a redemption payment with respect to any debt security. (Section 9.3)

Except for certain specified provisions, the holders of at least a majority in principal amount of the outstanding debt securities of any series may on behalf of the holders of all debt securities of that series waive our compliance with provisions of the indenture. (Section 9.2) The holders of a majority in principal amount of

the outstanding debt securities of any series may on behalf of the holders of all the debt securities of such series waive any past default under the indenture with respect to that series and its consequences, except a default in the payment of the principal of, or premium or any interest on, any debt security of that series; provided, however, that the holders of a majority in principal amount of the outstanding debt securities of any series may rescind an acceleration and its consequences, including any related payment default that resulted from the acceleration. (Section 6.13)

Defeasance of Debt Securities and Certain Covenants in Certain Circumstances

Legal Defeasance. The indenture provides that, unless otherwise provided by the terms of the applicable series of debt securities, we may be discharged from any and all obligations in respect of the debt securities of any series (subject to certain exceptions). We will be so discharged upon the irrevocable deposit with the trustee, in trust, of money and/or U.S. government obligations or, in the case of debt securities denominated in a single currency other than U.S. Dollars, government obligations of the government that issued or caused to be issued such currency, that, through the payment of interest and principal in accordance with their terms, will provide money or U.S. government obligations in an amount sufficient in the opinion of a nationally recognized firm of independent public accountants or investment bank to pay and discharge each installment of principal, premium and interest on and any mandatory sinking fund payments in respect of the debt securities of that series on the stated maturity of those payments in accordance with the terms of the indenture and those debt securities.

This discharge may occur only if, among other things, we have delivered to the trustee an opinion of counsel stating that we have received from, or there has been published by, the United States Internal Revenue Service a ruling or, since the date of execution of the indenture, there has been a change in the applicable United States federal income tax law, in either case to the effect that, and based thereon such opinion shall confirm that, the holders of the debt securities of that series will not recognize income, gain or loss for United States federal income tax purposes as a result of the deposit, defeasance and discharge and will be subject to United States federal income tax on the same amounts and in the same manner and at the same times as would have been the case if the deposit, defeasance and discharge had not occurred. (Section 8.3)

Defeasance of Certain Covenants. The indenture provides that, unless otherwise provided by the terms of the applicable series of debt securities, upon compliance with certain conditions:

- we may omit to comply with the covenant described under the heading "Consolidation, Merger and Sale of Assets" and certain other
 covenants set forth in the indenture, as well as any additional covenants which may be set forth in the applicable prospectus supplement;
- any omission to comply with those covenants will not constitute a Default or an Event of Default with respect to the debt securities of that series ("covenant defeasance").

The conditions include:

- depositing with the trustee money and/or U.S. government obligations or, in the case of debt securities denominated in a single currency
 other than U.S. Dollars, government obligations of the government that issued or caused to be issued such currency, that, through the
 payment of interest and principal in accordance with their terms, will provide money in an amount sufficient in the opinion of a nationally
 recognized firm of independent public accountants or investment bank to pay and discharge each installment of principal of, and premium
 and interest on, and any mandatory sinking fund payments in respect of the debt securities of that series on the stated maturity of those
 payments in accordance with the terms of the indenture and those debt securities; and
- delivering to the trustee an opinion of counsel to the effect that the holders of the debt securities of that series will not recognize income, gain or loss for United States federal income tax purposes as a result of the deposit and related covenant defeasance and will be subject to United States federal income tax on the same amounts and in the same manner and at the same times as would have been the case if the deposit and related covenant defeasance had not occurred. (Section 8.4)

No Personal Liability of Directors, Officers, Employees or Securityholders

None of our past, present or future directors, officers, employees or securityholders, as such, will have any liability for any of our obligations under the debt securities or the indenture or for any claim based on, or in respect or by reason of, such obligations or their creation. By accepting a debt security, each holder waives and releases all such liability. This waiver and release is part of the consideration for the issue of the debt securities. However, this waiver and release may not be effective to waive liabilities under U.S. federal securities laws, and it is the view of the SEC that such a waiver is against public policy.

Governing Law

The indenture and the debt securities, including any claim or controversy arising out of or relating to the indenture or the securities, will be governed by the laws of the State of New York.

The indenture will provide that we, the trustee and the holders of the debt securities (by their acceptance of the debt securities) irrevocably waive, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to the indenture, the debt securities or the transactions contemplated thereby.

The indenture will provide that any legal suit, action or proceeding arising out of or based upon the indenture or the transactions contemplated thereby may be instituted in the federal courts of the United States of America located in the City of New York or the courts of the State of New York in each case located in the City of New York, and we, the trustee and the holder of the debt securities (by their acceptance of the debt securities) irrevocably submit to the non-exclusive jurisdiction of such courts in any such suit, action or proceeding. The indenture will further provide that service of any process, summons, notice or document by mail (to the extent allowed under any applicable statute or rule of court) to such party's address set forth in the indenture will be effective service of process for any suit, action or other proceeding brought in any such court. The indenture will further provide that we, the trustee and the holders of the debt securities (by their acceptance of the debt securities) irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the courts specified above and irrevocably and unconditionally waive and agree not to plead or claim any such suit, action or other proceeding has been brought in an inconvenient forum. (Section 10.10)

DESCRIPTION OF OTHER SECURITIES

We will set forth in the applicable prospectus supplement a description of any warrants or units issued by us that may be offered and sold pursuant to this prospectus.

GLOBAL SECURITIES

Book-Entry, Delivery and Form

Unless we indicate differently in any applicable prospectus supplement or free writing prospectus, the securities initially will be issued in bookentry form and represented by one or more global notes or global securities, or, collectively, global securities. The global securities will be deposited with, or on behalf of, The Depository Trust Company, New York, New York, as depositary, or DTC, and registered in the name of Cede & Co., the nominee of DTC. Unless and until it is exchanged for individual certificates evidencing securities under the limited circumstances described below, a global security may not be transferred except as a whole by the depositary to its nominee or by the nominee to the depositary, or by the depositary or its nominee to a successor depositary or to a nominee of the successor depositary.

DTC has advised us that it is:

- a limited-purpose trust company organized under the New York Banking Law;
- a "banking organization" within the meaning of the New York Banking Law;
- a member of the Federal Reserve System;
- · a "clearing corporation" within the meaning of the New York Uniform Commercial Code; and
- a "clearing agency" registered pursuant to the provisions of Section 17A of the Exchange Act.

DTC holds securities that its participants deposit with DTC. DTC also facilitates the settlement among its participants of securities transactions, such as transfers and pledges, in deposited securities through electronic computerized book-entry changes in participants' accounts, thereby eliminating the need for physical movement of securities certificates. "Direct participants" in DTC include securities brokers and dealers, including underwriters, banks, trust companies, clearing corporations and other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation, or DTCC. DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others, which we sometimes refer to as indirect participants, that clear through or maintain a custodial relationship with a direct participant, either directly or indirectly. The rules applicable to DTC and its participants are on file with the SEC.

Purchases of securities under the DTC system must be made by or through direct participants, which will receive a credit for the securities on DTC's records. The ownership interest of the actual purchaser of a security, which we sometimes refer to as a beneficial owner, is in turn recorded on the direct and indirect participants' records. Beneficial owners of securities will not receive written confirmation from DTC of their purchases. However, beneficial owners are expected to receive written confirmations providing details of their transactions, as well as periodic statements of their holdings, from the direct or indirect participants through which they purchased securities. Transfers of ownership interests in global securities are to be accomplished by entries made on the books of participants acting on behalf of beneficial owners. Beneficial owners will not receive certificates representing their ownership interests in the global securities, except under the limited circumstances described below.

To facilitate subsequent transfers, all global securities deposited by direct participants with DTC will be registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of securities with DTC and their registration in the name of Cede & Co. or such other nominee will not change the beneficial ownership of the securities. DTC has no knowledge of the actual beneficial owners of the securities. DTC's records reflect only the identity of the direct participants to whose accounts the securities are credited, which may or may not be the beneficial owners. The participants are responsible for keeping account of their holdings on behalf of their customers.

So long as the securities are in book-entry form, you will receive payments and may transfer securities only through the facilities of the depositary and its direct and indirect participants. We will maintain an office or agency in the location specified in the prospectus supplement for the applicable securities, where notices and demands in respect of the securities and the indenture may be delivered to us and where certificated securities may be surrendered for payment, registration of transfer or exchange.

Conveyance of notices and other communications by DTC to direct participants, by direct participants to indirect participants and by direct participants and indirect participants to beneficial owners will be governed by arrangements among them, subject to any legal requirements in effect from time to time.

Redemption notices will be sent to DTC. If less than all of the securities of a particular series are being redeemed, DTC's practice is to determine by lot the amount of the interest of each direct participant in the securities of such series to be redeemed.

Neither DTC nor Cede & Co. (or such other DTC nominee) will consent or vote with respect to the securities. Under its usual procedures, DTC will mail an omnibus proxy to us as soon as possible after the record date. The omnibus proxy assigns the consenting or voting rights of Cede & Co. to those direct participants to whose accounts the securities of such series are credited on the record date, identified in a listing attached to the omnibus proxy.

So long as securities are in book-entry form, we will make payments on those securities to the depositary or its nominee, as the registered owner of such securities, by wire transfer of immediately available funds. If securities are issued in definitive certificated form under the limited circumstances described below and unless otherwise provided in the description of the applicable securities herein or in the applicable prospectus supplement, we will have the option of making payments by check mailed to the addresses of the persons entitled to payment or by wire transfer to bank accounts in the United States designated in writing to the applicable trustee or other designated party at least 15 days before the applicable payment date by the persons entitled to payment, unless a shorter period is satisfactory to the applicable trustee or other designated party.

Redemption proceeds, distributions and dividend payments on the securities will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit direct participants' accounts upon DTC's receipt of funds and corresponding detail information from us on the payment date in accordance with their respective holdings shown on DTC records. Payments by participants to beneficial owners will be governed by standing instructions and customary practices, as is the case with securities held for the account of customers in bearer form or registered in "street name." Those payments will be the responsibility of participants and not of DTC or us, subject to any statutory or regulatory requirements in effect from time to time. Payment of redemption proceeds, distributions and dividend payments to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC, is our responsibility, disbursement of payments to direct participants is the responsibility of DTC, and disbursement of payments to the beneficial owners is the responsibility of direct and indirect participants.

Except under the limited circumstances described below, purchasers of securities will not be entitled to have securities registered in their names and will not receive physical delivery of securities. Accordingly, each beneficial owner must rely on the procedures of DTC and its participants to exercise any rights under the securities and the indenture.

The laws of some jurisdictions may require that some purchasers of securities take physical delivery of securities in definitive form. Those laws may impair the ability to transfer or pledge beneficial interests in securities.

DTC may discontinue providing its services as securities depositary with respect to the securities at any time by giving reasonable notice to us. Under such circumstances, in the event that a successor depositary is not obtained, securities certificates are required to be printed and delivered.

As noted above, beneficial owners of a particular series of securities generally will not receive certificates representing their ownership interests in those securities. However, if:

- DTC notifies us that it is unwilling or unable to continue as a depositary for the global security or securities representing such series of securities or if DTC ceases to be a clearing agency registered under the Exchange Act at a time when it is required to be registered and a successor depositary is not appointed within 90 days of the notification to us or of our becoming aware of DTC's ceasing to be so registered, as the case may be;
- · we determine, in our sole discretion, not to have such securities represented by one or more global securities; or
- an Event of Default has occurred and is continuing with respect to such series of securities,

we will prepare and deliver certificates for such securities in exchange for beneficial interests in the global securities. Any beneficial interest in a global security that is exchangeable under the circumstances described in the preceding sentence will be exchangeable for securities in definitive certificated form registered in the names that the depositary directs. It is expected that these directions will be based upon directions received by the depositary from its participants with respect to ownership of beneficial interests in the global securities.

Euroclear and Clearstream

If so provided in the applicable prospectus supplement, you may hold interests in a global security through Clearstream Banking S.A., which we refer to as "Clearstream," or Euroclear Bank S.A./N.V., as operator of the Euroclear System, which we refer to as "Euroclear," either directly if you are a participant in Clearstream or Euroclear or indirectly through organizations which are participants in Clearstream or Euroclear. Clearstream and Euroclear will hold interests on behalf of their respective participants through customers' securities accounts in the names of Clearstream and Euroclear, respectively, on the books of their respective U.S. depositaries, which in turn will hold such interests in customers' securities accounts in such depositaries' names on DTC's books.

Clearstream and Euroclear are securities clearance systems in Europe. Clearstream and Euroclear hold securities for their respective participating organizations and facilitate the clearance and settlement of securities transactions between those participants through electronic book-entry changes in their accounts, thereby eliminating the need for physical movement of certificates.

Payments, deliveries, transfers, exchanges, notices and other matters relating to beneficial interests in global securities owned through Euroclear or Clearstream must comply with the rules and procedures of those systems. Transactions between participants in Euroclear or Clearstream, on the one hand, and other participants in DTC, on the other hand, are also subject to DTC's rules and procedures.

Investors will be able to make and receive through Euroclear and Clearstream payments, deliveries, transfers and other transactions involving any beneficial interests in global securities held through those systems only on days when those systems are open for business. Those systems may not be open for business on days when banks, brokers and other institutions are open for business in the United States.

Cross-market transfers between participants in DTC, on the one hand, and participants in Euroclear or Clearstream, on the other hand, will be effected through DTC in accordance with the DTC's rules on behalf of Euroclear or Clearstream, as the case may be, by their respective U.S. depositaries; however, such cross-market transactions will require delivery of instructions to Euroclear or Clearstream, as the case may be, by the counterparty in such system in accordance with the rules and procedures and within the established deadlines (European time) of such system. Euroclear or Clearstream, as the case may be, will, if the transaction meets its settlement requirements, deliver instructions to its U.S. depositary to take action to effect final settlement on its behalf by delivering or receiving interests in the global securities through DTC, and making or receiving payment in accordance with normal procedures for same-day fund settlement. Participants in Euroclear or Clearstream may not deliver instructions directly to their respective U.S. depositaries.

Due to time zone differences, the securities accounts of a participant in Euroclear or Clearstream purchasing an interest in a global security from a direct participant in DTC will be credited, and any such crediting will be reported to the relevant participant in Euroclear or Clearstream, during the securities settlement processing day (which must be a business day for Euroclear or Clearstream) immediately following the settlement date of DTC. Cash received in Euroclear or Clearstream as a result of sales of interests in a global security by or through a participant in Euroclear or Clearstream to a direct participant in DTC will be received with value on the settlement date of DTC but will be available in the relevant Euroclear or Clearstream cash account only as of the business day for Euroclear or Clearstream following DTC's settlement date.

Other

The information in this section of this prospectus concerning DTC, Clearstream, Euroclear and their respective book-entry systems has been obtained from sources that we believe to be reliable, but we do not take responsibility for this information. This information has been provided solely as a matter of convenience. The rules and procedures of DTC, Clearstream and Euroclear are solely within the control of those organizations and could change at any time. Neither we nor the trustee nor any agent of ours or of the trustee has any control over those entities and none of us takes any responsibility for their activities. You are urged to contact DTC, Clearstream and Euroclear or their respective participants directly to discuss those matters. In addition, although we expect that DTC, Clearstream and Euroclear will perform the foregoing procedures, none of them is under any obligation to perform or continue to perform such procedures and such procedures may be discontinued at any time. Neither we nor any agent of ours will have any responsibility for the performance or nonperformance by DTC, Clearstream and Euroclear or their respective participants of these or any other rules or procedures governing their respective operations.

SELLING SECURITYHOLDERS

Information about selling securityholders, where applicable, will be set forth in a prospectus supplement, in a post-effective amendment or in filings we make with the SEC under the Exchange Act that are incorporated by reference.

PLAN OF DISTRIBUTION

We or any of the selling securityholders may sell the offered securities from time to time:

- through underwriters or dealers;
- through agents;
- directly to one or more purchasers; or
- through a combination of any of these methods of sale.

We will identify the specific plan of distribution, including any underwriters, dealers, agents or direct purchasers and their compensation, in the applicable prospectus supplement.

LEGAL MATTERS

Latham & Watkins LLP, Menlo Park, California, will pass upon certain legal matters relating to the issuance and sale of the securities offered hereby on behalf of Gritstone Oncology, Inc. Additional legal matters may be passed upon for us, the selling securityholders or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2019, as set forth in their report which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.