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

FORM 8-K

**CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): October 24, 2022

Gritstone bio, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-38663
(Commission
File Number)

47-4859534
(IRS Employer
Identification Number)

**5959 Horton Street, Suite 300
Emeryville, California 94608**
(Address of principal executive offices, including Zip Code)

Registrant's telephone number, including area code: (510) 871-6100

Not Applicable
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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

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

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 1.01 Entry into a Material Definitive Agreement.

On October 24, 2022, Gritstone bio, Inc. (the “Company”) entered into a Securities Purchase Agreement (the “Purchase Agreement”) with certain purchasers identified on the signature pages thereto (the “Purchasers”), pursuant to which the Company will issue and sell to the Purchasers, in an unregistered offering, shares of common stock, par value \$0.0001 per share (the “Common Stock”), and pre-funded warrants to purchase shares of Common Stock for aggregate gross proceeds to the Company of approximately \$45.0 million (the “Private Placement”). The Private Placement was made in accordance with applicable Nasdaq rules and priced at the “Minimum Price” (as defined in the Nasdaq rules).

The closing of the Private Placement is anticipated to occur on October 27, 2022 (the “Closing”), subject to the satisfaction of customary closing conditions. Pursuant to the Purchase Agreement, the Company has agreed to sell and certain Purchasers have agreed to purchase (i) an aggregate of 6,637,165 shares of Common Stock (the “Shares”) at a per share purchase price of \$2.26, and (ii) pre-funded warrants to purchase an aggregate of 13,274,923 shares of Common Stock (the “Pre-Funded Warrants” and together with the Shares, the “Securities”) at a per warrant share price of \$2.2599. The Pre-Funded Warrants will expire when exercised in full, will have a nominal exercise price of \$0.0001 per share, and are immediately exercisable upon issuance. The exercise price and number of shares of Common Stock issuable upon the exercise of the Pre-Funded Warrants will be subject to adjustment in the event of any stock dividends and splits, reverse stock split, recapitalization, reorganization or similar transaction, as described in the Pre-Funded Warrants.

Pursuant to the Purchase Agreement, the Company has 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 Closing, to register the resale of the Securities issued at the time of the Closing.

The foregoing summaries of the Private Placement, the Securities to be issued in connection therewith, and the Purchase Agreement and the Pre-Funded Warrants are qualified in their entirety by reference to the definitive transaction documents. Copies of the forms of the Pre-Funded Warrant and the Purchase Agreement are attached hereto as Exhibits 4.1 and 10.1, respectively, and are incorporated herein by reference.

Item 3.02 Unregistered Sales of Equity Securities.

To the extent required by Item 3.02 of Form 8-K, the information regarding the sale and purchase of the Securities set forth under Item 1.01 of this Form 8-K is incorporated by reference in this Item 3.02. The Company has offered and will sell the Securities in reliance on the exemption from registration provided for under Section 4(a)(2) of the Securities Act of 1933, as amended (the “Securities Act”), and Rule 506 of Regulation D thereunder. The Company is relying on this exemption from registration for private placements based in part on the representations made by the Purchasers, including the representations with respect to each Purchaser’s status as an accredited investor, as such term is defined in Rule 501(a) of the Securities Act, and each Purchaser’s investment intent. The offer and sale of the Securities have not been registered under the Securities Act.

Item 8.01 Other Events

On October 25, 2022, the Company announced positive Phase 1 results from its ongoing Coral-BOOST and CORAL-CEPI trials evaluating the Company’s self-amplifying mRNA vaccine candidates against SARS-CoV-2.

A copy of the press release with the foregoing announcement is filed as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated by reference herein.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

<u>Exhibit No.</u>	<u>Description</u>
4.1	Form of Pre-Funded Warrant
10.1	Securities Purchase Agreement, dated October 24, 2022
99.1	Press Release dated October 25, 2022
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

SIGNATURES

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

GRITSTONE BIO, INC.

Date: October 25, 2022

By: /s/ Andrew Allen
Andrew Allen
President and Chief Executive Officer

NEITHER THIS SECURITY NOR THE SECURITIES FOR WHICH THIS SECURITY IS EXERCISABLE HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS.

WARRANT NO. 2022-[●]

NUMBER OF SHARES: [●]
(subject to adjustment hereunder)

DATE OF ISSUANCE: October 27, 2022

EXPIRATION DATE: The first date on which no shares of Common Stock are issuable upon a cash exercise of this Warrant

PRE-FUNDED WARRANT TO PURCHASE SHARES OF
COMMON STOCK OF
GRITSTONE BIO, INC.

This Warrant (the "Warrant") is issued by Gritstone bio, Inc., a Delaware corporation (the "Company"), to [●], or its registered assigns (including any successors or assigns, the "Holder"), and is subject to the terms and conditions set forth below. The Warrant is being issued pursuant to that certain Securities Purchase Agreement, dated as of October 24, 2022, among the Company and the purchasers signatory thereto, as amended and/or restated from time to time (the "Purchase Agreement"). Capitalized terms used and not otherwise defined herein shall have the meanings set forth in the Purchase Agreement.

1. EXERCISE OF WARRANT.

(a) Number and Exercise Price of Warrant Shares; Expiration Date. Subject to the terms and conditions set forth herein, the Holder is entitled to purchase from the Company up to [●] shares of the Company's Common Stock, \$0.0001 par value per share (the "Common Stock") (as adjusted from time to time pursuant to the provisions of this Warrant) (the "Warrant Shares") until this Warrant is exercised in full. The aggregate exercise price of this Warrant of \$[●], except for a nominal exercise price of \$0.0001 per Warrant Share, was paid to the Company on or prior to the date of issuance of this Warrant, and, consequently, no additional consideration (other than the nominal exercise price of \$0.0001 per Warrant Share) shall be required to be paid by the Holder to effect any exercise of this Warrant. The Holder shall not be entitled to return or refund of all, or any portion, of such pre-paid aggregate exercise price under any circumstance or for any reason whatsoever, including in the event this Warrant shall not have been exercised prior to the Expiration Date. The remaining unpaid exercise price per share of Common Stock under this Warrant shall be \$0.0001, subject to adjustment as provided herein (the "Exercise Price").

(b) Method of Exercise. While this Warrant remains outstanding and exercisable in accordance with Section 1(a) above, the Holder may exercise this Warrant in whole or in part in accordance with Section 5 by either:

(1) wire transfer to the Company or cashier's check drawn on a United States bank made payable to the order of the Company, or

(2) exercising of the right to credit the Exercise Price against the Fair Market Value (as defined below) of the Warrant Shares (as defined below) at the time of exercise (the "Net Exercise") pursuant to Section 1(c).

(c) Net Exercise. At any time the Holder may elect to exercise this Warrant by Net Exercise pursuant to this Section 1(c). At any time that this Warrant may be exercised by Net Exercise pursuant to this Section 1(c), if the Company shall receive written notice from the Holder at the time of exercise of this Warrant that the Holder elects to Net Exercise the Warrant, the Company shall deliver to such Holder (without payment by the Holder of any exercise price in cash) that number of Warrant Shares computed using the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where

X = The number of Warrant Shares to be issued to the Holder.

Y = The number of Warrant Shares purchasable under this Warrant or, if only a portion of the Warrant is being exercised, the portion of the Warrant being cancelled (at the date of such calculation).

A = The Fair Market Value of one share of Common Stock (at the date of such calculation).

B = The Exercise Price (as adjusted to the date of such calculations).

The "Fair Market Value" of one share of Common Stock shall mean (x) the last reported sale price and, if there are no sales, the last reported bid price, of the Common Stock on the last trading day prior to the date of exercise on the trading market on which the Common Stock is listed as reported by Bloomberg Financial Markets (or a comparable reporting service of national reputation selected by the Company and reasonably acceptable to the Holder if Bloomberg Financial Markets is not then reporting sales prices of the Common Stock) (collectively, "Bloomberg"), or (y) if the foregoing does not apply, the last sales price of such security in the over-the-counter market on the pink sheets by Pink Sheets LLC (formerly the National Quotation Bureau, Inc.) (the "pink sheets") or bulletin board for such security as reported by Bloomberg, or if no sales price is so reported, the last bid price of the Common Stock as reported by Bloomberg or (z) if the fair market value cannot be calculated on any of the foregoing bases, the fair market value determined by the Company's Board of Directors in good faith.

(d) Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the Warrant Shares, the Company shall promptly issue to the Holder the number of Warrant Shares that are not disputed.

(e) Deemed Exercise. In the event that immediately prior to the close of business on the Expiration Date, the Fair Market Value of one share of Common Stock (as determined in accordance with Section 1(c) above) is greater than the then applicable Exercise Price, this Warrant shall be deemed to be automatically exercised on a net exercise issue basis pursuant to Section 1(c) above, and the Company shall deliver the applicable number of shares of Common Stock to the Holder pursuant to the provisions of Section 1(c) above and this Section 1(e). Notwithstanding anything to the contrary contained in this Section 1(e), to the extent that the Holder's right to receive shares of Common Stock upon such a net exercise would result in the Holder and its affiliates exceeding the Beneficial Ownership Limitation, if applicable pursuant to Section 5(c) herein, then the Holder shall not be entitled to such shares of Common Stock to the extent of the Beneficial Ownership Limitation (and shall not be entitled to beneficial ownership of such shares of Common Stock (and beneficial ownership) to the extent of any such excess) and the portion of such shares of Common Stock shall be held in abeyance for the benefit of the Holder until such time or times, if ever, as its right thereto would not result in the Holder and its affiliates exceeding the Beneficial Ownership Limitation, at which time or times the Holder shall be granted such shares of Common Stock to the same extent as if there had been no such limitation).

2. CERTAIN ADJUSTMENTS.

(a) Adjustment of Number of Warrant Shares and Exercise Price. The number and kind of Warrant Shares purchasable upon exercise of this Warrant and the Exercise Price shall be subject to adjustment from time to time as follows:

(1) Subdivisions, Combinations and Other Issuances. If the Company shall at any time after the Date of Issuance but prior to the Expiration Date subdivide its shares of capital stock of the same class as the Warrant Shares, by split-up or otherwise, or combine such shares of capital stock, or issue additional shares of capital stock as a dividend with respect to any shares of such capital stock, the number of Warrant Shares issuable on the exercise of this Warrant shall forthwith be proportionately increased in the case of a subdivision or stock dividend, or proportionately decreased in the case of a combination. Appropriate adjustments shall also be made to the Exercise Price payable per share, but the aggregate Exercise Price payable for the total number of Warrant Shares purchasable under this Warrant (as adjusted) shall remain the same. Any adjustment under this Section 2(a)(1) shall become effective at the close of business on the date the subdivision or combination becomes effective, or as of the record date of such dividend, or in the event that no record date is fixed, upon the making of such dividend.

(2) Reorganizations or Mergers. In case of any reclassification, capital reorganization or change in the capital stock of the Company (other than as a result of a subdivision, combination or stock dividend provided for in Section 2(a)(1) above) that occurs after the Date of Issuance, then as a condition of such reclassification, reorganization or change, lawful provision shall be made, and duly executed documents evidencing the same from the Company or its successor shall be delivered to the Holder, so that the Holder shall thereafter have the right at any time prior to the expiration of this Warrant to purchase, at a total price equal to that payable

upon the exercise of this Warrant, the kind and amount of shares of stock and/or other securities or property (including, if applicable, cash) receivable in connection with such reclassification, reorganization or change by a holder of the same number and type of securities as were purchasable as Warrant Shares by the Holder immediately prior to such reclassification, reorganization or change. In any such case, appropriate provisions shall be made with respect to the rights and interest of the Holder so that the provisions hereof shall thereafter be applicable with respect to any shares of stock or other securities or property deliverable upon exercise hereof, and appropriate adjustments shall be made to the Exercise Price payable hereunder, provided the aggregate Exercise Price shall remain the same (and, for the avoidance of doubt, this Warrant shall be exclusively exercisable for such shares of stock and/or other securities or property from and after the consummation of such reclassification or other change in the capital stock of the Company).

(3) Rights Upon Distribution of Assets. If the Company shall declare or make any dividend, other distribution of its assets (or rights to acquire its assets) or evidences of its indebtedness to holders of shares of Common Stock generally (which dividend or other distribution has not already been given to the Holder with respect to the Warrant Shares), by way of return of capital or otherwise not addressed by this Section 2 above (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, subdivision, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a “Distribution”), at any time after the issuance of this Warrant and prior to the Expiration Date, then in each such case the Holder shall be entitled (subject to the following proviso) to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant, including, without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution. Notwithstanding anything to the contrary contained herein, to the extent that the Holder’s right to participate in any such Distribution would result in the Holder and its affiliates exceeding the Beneficial Ownership Limitation, if applicable pursuant to Section 5(c) herein, then the Holder shall not be entitled to participate in such Distribution to the extent of the Beneficial Ownership Limitation (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such Distribution (and beneficial ownership) to the extent of any such excess) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time or times, if ever, as its right thereto would not result in the Holder and its affiliates exceeding the Beneficial Ownership Limitation, at which time or times the Holder shall be granted such Distribution (and any Distributions declared or made on such initial Distribution or on any subsequent Distribution held similarly in abeyance) to the same extent as if there had been no such limitation).

(4) Purchase Rights. If at any time the Company grants, issues or sells any options, convertible securities or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of Common Stock (the “Purchase Rights”), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant, including without limitation, the Beneficial

Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder and the other Attribution Parties (as defined in Section 5(c)) exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such Purchase Right (and beneficial ownership) to such extent) and such Purchase Right to such extent shall be held in abeyance for the benefit of the Holder until such time or times as its right thereto would not result in the Holder and the other Attribution Parties exceeding the Beneficial Ownership Limitation, at which time or times the Holder shall be granted such right (and any Purchase Right granted, issued or sold on such initial Purchase Right or on any subsequent Purchase Right held similarly in abeyance) to the same extent as if there had been no such limitation).

(b) Notice of Adjustment. When any adjustment is required to be made in the number or kind of shares purchasable upon exercise of the Warrant or in the Exercise Price, the Company shall promptly notify the Holder of such event and of the number of Warrant Shares or other securities or property thereafter purchasable upon exercise of this Warrant.

(c) Calculations. No adjustment in the Exercise Price shall be required unless such adjustment would require an increase or decrease of at least \$0.01 in such price; provided, however, that any adjustment which by reason of this Section 2(c) is not required to be made shall be carried forward and taken into account in any subsequent adjustments under this Section 2. All calculations under this Section 2 shall be made by the Company in good faith and shall be made to the nearest cent or to the nearest one hundredth of a share, as applicable. No adjustment need be made for a change in the par value or no par value of the Company's Common Stock.

(d) Treatment of Warrant upon a Change of Control.

(1) If, at any time while this Warrant is outstanding, there is a Change of Control (as defined below), then the Holder shall have the right thereafter to receive, upon exercise of this 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 this Warrant (the "Alternate Consideration"). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Change of Control, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of 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 shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Change of Control. Any successor to the Company or surviving entity in such Change of Control shall issue to the Holder a new warrant substantially in the form of this Warrant and consistent with the foregoing provisions and evidencing the Holder's right to purchase the Alternate Consideration for the aggregate Exercise Price upon exercise thereof.

(2) Notice of a Change of Control. The Company shall provide written notice to the Holder of a Change of Control reasonably promptly after public announcement thereof (and, in any event, not less than twenty (20) trading days prior to the consummation of such Change of Control) and such notice shall include (i) the projected date of consummation of the Change of Control to the extent known at the time such notice is delivered and (ii) the expected consideration to be received by the Company's stockholders in such Change of Control.

(3) As used in this Warrant, a "Change of Control" shall mean (i) a merger or consolidation of the Company with another entity, in which the Company is not the survivor or the stockholders of the Company immediately prior to such merger or consolidation do not own, directly or indirectly, at least 50% of the voting securities of the surviving entity, (ii) the consummation of a stock purchase agreement or other business combination of the Company with another Person whereby such other Person acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock purchase agreement or other business combination), (iii) the sale, assignment, transfer, conveyance or other disposal of all or substantially all of the properties or assets or all or a majority of the outstanding voting securities of the Company, (iv) a purchase, tender or exchange offer accepted by the holders of a majority of the outstanding voting shares of capital stock of the Company directly or indirectly, in one or more related transactions, (v) a "person" or "group" (as these terms are used for purposes of Section 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) is or shall become the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of at least a majority of the outstanding shares of Common Stock of the Company through a stock purchase agreement or other business combination (including, without limitation, a reorganization, reclassification, spin off or scheme of arrangement) with another person, or (vi) the Company has elected to reorganize, recapitalize or reclassify its Common Stock (other than to change domicile).

3. NO STOCKHOLDER RIGHTS. Until the exercise of this Warrant, the Holder shall not have, nor exercise, any rights as a stockholder of the Company (including without limitation the right to notification of stockholder meetings or the right to receive any notice or other communication concerning the business and affairs of the Company), except as expressly provided in this Warrant.

4. COVENANT TO PERFORM; NON-CIRCUMVENTION. The Company hereby covenants and agrees that the Company will at all times in good faith carry out all the provisions of this Warrant and will not by amendment of its certificate of incorporation, bylaws or other organizational documents or through a Change of Control, dissolution, sale of assets or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant. Without limiting the generality of the foregoing, the Company (i) shall not increase the par value of any shares of Common Stock receivable upon the exercise of this Warrant above the Exercise Price then in effect, (ii) shall take such actions as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable shares of Common Stock upon the exercise of this Warrant, and (iii) shall, so long as this Warrant is outstanding, take action necessary to reserve and keep available out of its authorized and unissued shares of Common Stock solely for the purpose of effecting the exercise of this Warrant, 100% of the number of shares of Common Stock issuable upon exercise of this Warrant then outstanding.

5. MECHANICS OF EXERCISE.

(a) Delivery of Warrant Shares Upon Exercise. This Warrant may be exercised by the Holder hereof upon the delivery of a Notice of Exercise (the “Exercise Notice”) attached hereto as Exhibit A properly completed and duly executed by the Holder hereof, at the office of the Company designated for such purpose together with this Warrant and payment in full of the Exercise Price (unless the Holder has elected to Net Exercise) then in effect with respect to the number of Warrant Shares as to which the Warrant is being exercised. This Warrant shall be deemed to have been exercised immediately prior to the close of business on the date of its surrender for exercise as provided above, and the person entitled to receive the Warrant Shares issuable upon such exercise shall be treated for all purposes as the holder of such shares of record as of the close of business on such date. Notwithstanding anything herein to the contrary (although the Holder may surrender the Warrant to, and receive a replacement Warrant from, the Company), the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) trading days of the date the final Exercise Notice is delivered to the Company. Execution and delivery of the Exercise Notice with respect to less than all of the Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. On or before the second (2nd) trading day following the date on which the Company has received each of the Exercise Notice and the aggregate Exercise Price (or confirmation from the Company of the number of shares of Warrant Shares issuable in connection with a duly executed and delivered notice of Net Exercise), the Company shall transmit by facsimile an acknowledgment of confirmation of receipt of the Exercise Notice to the Company’s transfer agent (“Transfer Agent”). The Company shall deliver any objection to the Exercise Notice on or before the second trading day following the date on which the Company has received the Exercise Notice. On or before the second (2nd) trading day following the date on which the Company has received the Exercise Notice and the aggregate Exercise Price (the “Share Delivery Date”), the Company shall (X) provided that the Transfer Agent is participating in The Depository Trust Company (“DTC”) Fast Automated Securities Transfer Program and either (i) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by the Holder or (ii) this Warrant is being exercised via cashless exercise and Rule 144 is available, upon the request of the Holder, credit such aggregate number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the Holder or its designee’s balance account with DTC through its Deposit Withdrawal Agent Commission system, or (Y) if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, or (i) there is not an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by the Holder and (ii) this Warrant is being exercised via cashless exercise and Rule 144 is not available, upon the request of the Holder, issue and dispatch by first class mail, postage prepaid, to the address as specified in the Exercise Notice, a certificate, registered in the Company’s share register in the name of the Holder or its designee, for the number of shares of Common Stock to which the Holder is entitled pursuant to such exercise. Upon delivery of the Exercise Notice and the payment of the aggregate Exercise Price (or a duly executed and delivered notice of Net Exercise), the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date such Warrant Shares are credited to the Holder’s DTC

account or the date of delivery of the certificates or book-entry position evidencing such Warrant Shares, as the case may be. The Company shall pay any and all taxes (other than taxes based upon the income of the Holder) which may be payable with respect to the issuance and delivery of Warrant Shares upon exercise of this Warrant; provided, that the Company shall not be required to pay any tax that may be payable in respect of any transfer involved in the issue and delivery of shares of Common Stock in any name other than that of the Holder, in either case with respect to any income or transfer tax due by the Holder with respect to such shares of Common Stock issued upon exercise of this Warrant. The Company shall not have any duty or obligation to take any action under any section of this Agreement that requires the payment of taxes and/or charges unless and until it is satisfied that all such payments have been made.

(b) Company's Failure to Timely Deliver Securities. If the Company shall fail for any reason or for no reason to issue to the Holder by the Share Delivery Date in compliance with the terms of this Section 5, a certificate or book entry position for the number of shares of Common Stock to which the Holder is entitled and register such shares of Common Stock on the Company's share register or to credit the Holder's balance account with DTC for such number of shares of Common Stock to which the Holder is entitled upon the Holder's exercise of this Warrant, and if on or after such trading day the Holder purchases (in an open market transaction or otherwise, provided such purchases shall be made in a commercially reasonable manner at prevailing market prices) shares of Common Stock to deliver in satisfaction of a sale by the Holder of shares of Common Stock issuable upon such exercise that the Holder anticipated receiving from the Company, then the Company shall, within two (2) trading days after the Holder's request and in the Holder's discretion, either (i) pay cash to the Holder in an amount equal to the Holder's total purchase price (including commercially reasonable brokerage commissions, if any) for the shares of Common Stock so purchased (the "Buy-In Price"), at which point the Company's obligation to deliver such certificate or evidence of book entry position (and to issue such Warrant Shares) shall terminate, or (ii) pay cash to the Holder in an amount equal to the excess (if any) of the Buy-In Price over the product of (A) such number of shares of Common Stock, times (B) the price at which the sell order giving rise to such purchase obligation was executed (assuming such sale was executed on commercially reasonable terms at prevailing market prices) and, at the option of the holder, either (x) promptly honor its obligation to deliver to the Holder a certificate or certificates or evidence of book entry position representing such Warrant Shares or (y) reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded).

(c) Holder's Exercise Limitation. Notwithstanding anything to the contrary contained in this Warrant, this Warrant shall not be exercisable by the Holder pursuant to Section 1 or otherwise, and any such exercise shall be void ab initio, to the extent (but only to the extent) that after giving effect to such issuance after exercise as set forth on the applicable Exercise Notice, the Holder (together with the Holder's affiliates, and any other persons acting as a group together with the Holder or any of the Holder's affiliates (such person "Attribution Parties")), would beneficially own in excess of 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issued upon exercise of this Warrant (the "Beneficial Ownership Limitation"). Notwithstanding the foregoing, the Holder shall have the right to increase or decrease the Beneficial Ownership Limitation (to an amount not to exceed 9.9% of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this

Warrant, with any increase to be effective only upon the Holder providing the Company with prior written notice of such increase, which shall be effective 61 days after delivery of such notice to the Company. To the extent the above limitation applies, the determination of whether this Warrant shall be exercisable (vis-à-vis other convertible, exercisable or exchangeable securities owned by the Holder or any of its Attribution Parties) and of which such securities shall be exercisable (as among all such securities owned by the Holder or any of its Attribution Parties) shall, subject to such Beneficial Ownership Limitation, be determined by the Holder, and the Company shall have no responsibility for determining the accuracy of the Holder's determination. No prior inability to exercise this Warrant pursuant to this paragraph shall have any effect on the applicability of the provisions of this paragraph with respect to any subsequent determination of exercisability. For purposes of the calculation of the Beneficial Ownership Limitation, the aggregate number of shares of Common Stock beneficially owned by the Holder and its Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining nonexercised portion of this Warrant beneficially owned by the Holder or any of its Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other convertible notes or convertible preferred stock or warrants) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Attribution Parties. Except as set forth in the preceding sentence, for purposes of this section, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 5(c), in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Securities and Exchange Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Company's transfer agent setting forth the number of shares of Common Stock outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 5(c) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant. Upon the written request of the Holder, the Company shall within three (3) trading days confirm orally or in writing to the Holder the number of shares of Common Stock then outstanding, including by virtue of any prior conversion or exercise of convertible or exercisable securities into Common Stock, including, without limitation, pursuant to this Warrant or securities issued pursuant to the Purchase Agreement.

6. CERTIFICATE OF ADJUSTMENT. Whenever the Exercise Price or number or type of securities issuable upon exercise of this Warrant is adjusted, as herein provided, the Company shall, at its expense, promptly deliver to the Holder a certificate of an officer of the Company setting forth the nature of such adjustment and showing in detail the facts upon which such adjustment is based.

7. NOTICES. In the event of:

(a) any taking by the Company of a record of the holders of any class of securities for the purpose of determining the holders thereof who are entitled to receive any dividend (other than a cash dividend payable out of earned surplus of the Company) or other distribution, or any right to subscribe for, purchase or otherwise acquire any shares of stock of any class or any other securities or property, or to receive any other right; or

(b) any voluntary or involuntary dissolution, liquidation or winding-up of the Company, then and in each such event the Company will promptly mail or cause to be delivered to the Holder (or a permitted transferee) a notice specifying (i) the date on which any such record is to be taken for the purpose of such dividend, distribution or right, and stating the amount and character of such dividend, distribution or right, and (ii) the date on which any such dissolution, liquidation or winding-up is to take place, and the time, if any, as of which the holders of record of Common Stock (or other securities) shall be entitled to exchange their shares of Common Stock (or other securities) for securities or other property deliverable upon such dissolution, liquidation or winding-up. Such notice shall be delivered at least twenty (20) days prior to the date therein specified.

(c) Whenever any other notice is required to be given under this Warrant, unless otherwise provided herein, the Company shall provide prompt written notice of all actions taken pursuant to this Warrant, including in reasonable detail a description of such action and the reason therefore.

8. REPLACEMENT OF WARRANTS. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of any such loss, theft or destruction of this Warrant, on delivery of an indemnity agreement reasonably satisfactory in form and amount to the Company or, in the case of any such mutilation, on surrender and cancellation of such Warrant, the Company at its expense will execute and deliver, in lieu thereof, a new Warrant of like tenor.

9. **ISSUANCE OF NEW WARRANTS.** Whenever the Company is required to issue a new Warrant pursuant to the terms of this Warrant, such new Warrant (i) shall be of like tenor with this Warrant, (ii) shall represent, as indicated on the face of such new Warrant, the right to purchase the Warrant Shares then underlying this Warrant (or in the case of a new Warrant being issued pursuant to Sections 8 or 9, the Warrant Shares designated by the Holder which, when added to the number of shares of Common Stock underlying the other new Warrants issued in connection with such issuance, does not exceed the number of Warrant Shares then underlying this Warrant), (iii) shall have an issuance date, as indicated on the face of such new Warrant which is the same as the Issuance Date, and (iv) shall have the same rights and conditions as this Warrant.

10. **NO FRACTIONAL SHARES.** No fractional Warrant Shares or scrip representing fractional shares will be issued upon exercise of this Warrant. In lieu of any fractional shares which would otherwise be issued, the Company shall pay cash equal to the product of such fraction multiplied by the Fair Market Value of one Warrant Share.

11. **AMENDMENT AND WAIVER.** Except as otherwise provided herein, the provisions of this Warrant may be amended and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Holder.

12. **TRADING DAYS.** If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall be other than a day on which the Common Stock is traded (which for the avoidance of doubt includes a Saturday, Sunday or a legal U.S. holiday) on the Nasdaq Global Select Market, or, if the Nasdaq Global Select Market is not the principal trading market for the Common Stock or other such securities, as applicable, then on the principal securities exchange or securities market on which the Common Stock is then traded then such action may be taken or such right may be exercised on the next succeeding day on which the Common Stock is so traded.

13. **TRANSFERS; EXCHANGES.**

(a) Subject to compliance with applicable federal and state securities laws and Section 7 hereof, this Warrant may be transferred by the Holder with respect to all of the Warrant Shares purchasable hereunder. For a transfer of this Warrant, as an entirety by Holder, upon surrender of this Warrant to the Company, together with the Notice of Assignment in the form attached hereto as Exhibit B properly completed and duly executed by the Holder, the Company shall issue a new Warrant of the same denomination to the assignee. Upon surrender of this Warrant to the Company, together with the Notice of Assignment in the form attached hereto as Exhibit B properly completed and duly executed by the Holder, for transfer of this Warrant with respect to a portion of the Warrant Shares purchasable hereunder, the Company will forthwith issue and deliver upon the order of the Holder a new Warrant (in accordance with Section 9), registered as the Holder may request, representing the right to purchase the number of Warrant Shares being transferred by the Holder and, if less than the total number of Warrant Shares then underlying this Warrant is being transferred, a new Warrant (in accordance with Section 9) to the Holder representing the right to purchase the number of Warrant Shares not being transferred.

(b) This Warrant is exchangeable, without expense, at the option of the Holder, upon presentation and surrender hereof to the Company for other warrants of different denominations entitling the holder thereof to purchase in the aggregate the same number of shares of Common Stock purchasable hereunder. This Warrant may be combined with other warrants that carry the same rights upon presentation hereof at the office of the Company designated for such purpose together with a written notice specifying the denominations in which new warrants are to be issued to the Holder and signed by the Holder hereof. The term "Warrants" as used herein includes any warrants into which this Warrant may be divided or exchanged.

(c) If, at the time of the surrender of this Warrant in connection with any transfer of this Warrant, the transfer of this Warrant shall not be either (i) registered pursuant to an effective registration statement under the Securities Act and under applicable state securities or blue sky laws or (ii) eligible for resale pursuant to Rule 144, the Company may require, as a condition of allowing such transfer; that the Holder or transferee of this Warrant, as the case may be, provide to the Company an opinion of counsel selected by the Holder and reasonably acceptable to the Company, the form and substance of which opinion shall be reasonably satisfactory to the Company, to the effect that such transfer does not require registration of such transferred Warrant under the Securities Act.

(d) The Holder, by the acceptance hereof, represents and warrants that, except when it exercises this Warrant pursuant to a Net Exercise, it is acquiring this Warrant and, upon any exercise hereof, will acquire the Warrant Shares issuable upon such exercise, for its own account and not with a view to or for distributing or reselling such Warrant Shares or any part thereof in violation of the Securities Act or any applicable state securities law, except pursuant to sales registered or exempted under the Securities Act.

14. GOVERNING LAW; VENUE. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. With respect to any disputes arising out of or related to this Warrant, the parties consent to the exclusive jurisdiction of, and venue in, the state courts in the State of New York (or in the event of exclusive federal jurisdiction, the courts of the District of New York). Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Warrant and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY WAIVES, 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 THIS WARRANT OR THE TRANSACTIONS CONTEMPLATED HEREBY.

15. DISPUTE RESOLUTION. In the case of a dispute as to the determination of the Exercise Price, the arithmetic calculation of the Warrant Shares or under Sections 2 or 6, the disputing party shall submit the disputed determinations or arithmetic calculations to the other party. If the Holder and the Company are unable to agree upon such determination or calculation of the Exercise Price or the Warrant Shares within three (3) trading days of such disputed determination or arithmetic calculation being submitted to the non-disputing party, then the Company shall, within two (2) trading days submit the dispute to an independent, reputable accountant. The Company shall cause, at the expense of the prevailing party, the accountant to perform the determinations or calculations and notify the Company and the Holder of the results no later than ten (10) trading days from the time it receives the disputed determinations or calculations. Such accountant's determination or calculation shall be binding upon all parties absent demonstrable error.

16. REMEDIES, OTHER OBLIGATIONS, BREACHES AND INJUNCTIVE RELIEF. The remedies provided in this Warrant shall be cumulative and in addition to all other remedies available under this Warrant, at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the right of the Holder to pursue actual damages for any failure by the Company to comply with the terms of this Warrant.

17. CONSTRUCTION; HEADINGS. This Warrant shall be deemed to be jointly drafted by the Company and the Holder and shall not be construed against any person as the drafter hereof. The headings of this Warrant are for convenience of reference and shall not form part of, or affect the interpretation of, this Warrant.

18. SUCCESSORS AND ASSIGNS. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of the Holder. The provisions of this Warrant are intended to be for and the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

19. RESTRICTIONS. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, must comply with the applicable restrictions upon resale imposed by state and federal securities laws.

20. MISCELLANEOUS. All notices, requests, consents and other communications hereunder shall be in writing, shall be sent by confirmed electronic mail, or mailed by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, and shall be deemed given when so sent in the case of electronic mail transmission, or when so received in the case of mail or courier, and addressed as follows: (a) if to the Company, at Gritstone bio, Inc. 5959 Horton Street, Suite 300, Emeryville, CA 94608, Attention: Chief Executive Officer; General Counsel; with a copy to (which shall not constitute notice) Latham & Watkins LLP, 140 Scott Drive, Menlo Park, CA 94025, Attention: Brian Cuneo and (b) if to the Holder, at such address or addresses (including copies to counsel) as may have been furnished by the Holder to the Company in writing. The invalidity or unenforceability of any provision hereof shall in no way affect the validity or enforceability of any other provisions.

[Signature Page Follows]

IN WITNESS WHEREOF, this Warrant is issued effective as of the date first set forth above.

GRITSTONE BIO, INC.

By: _____
Name:
Title:

EXHIBIT A

NOTICE OF INTENT TO EXERCISE
(To be signed only upon exercise of Warrant)

To: Gritstone bio, Inc.

The undersigned, the Holder of the attached Warrant, hereby irrevocably elects to exercise the purchase right represented by such Warrant for, and to purchase thereunder, [●] shares of Common Stock of Gritstone bio, Inc., a Delaware corporation (the "Company"), and (choose one)

[●] herewith makes payment of USD [●] thereof

or

[●] elects to Net Exercise the Warrant pursuant to Section 1(b)(2) thereof.

The undersigned requests that the certificates or book entry position evidencing the shares to be acquired pursuant to such exercise be issued in the name of, and delivered to [●], whose address is [●].

By its delivery of this Exercise Notice, the undersigned represents and warrants to the Company that in giving effect to the exercise evidenced hereby the Holder will not beneficially own in excess of the number of shares of Common Stock (as determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended) permitted to be owned under Section 5(c) of the Warrant to which this notice relates.

By its signature below the undersigned hereby represents and warrants that it is an "accredited investor" as defined in Rule 501(a) of Regulation D promulgated under the Securities Act of 1933, as amended, and agrees to be bound by the terms and conditions of the attached Warrant as of the date hereof, including Section 5 thereof.

DATED: _____

(Signature must conform in all respects to name of the Holder as specified on the face of the Warrant)

[Holder Name]

Address: _____

EXHIBIT B

NOTICE OF ASSIGNMENT FORM

FOR VALUE RECEIVED, [Holder Name] (the "Assignor") hereby sells, assigns and transfers all of the rights of the undersigned Assignor under the attached Warrant with respect to the number of shares of common stock of Gritstone bio, Inc., a Delaware corporation (the "Company"), covered thereby set forth below, to the following "Assignee" and, in connection with such transfer, represents and warrants to the Company that the transfer is in compliance with Section 5 of the Warrant and applicable federal and state securities laws:

NAME OF ASSIGNEE	ADDRESS
Number of shares: _____	
Dated: _____	Signature: _____
_____	_____

ASSIGNEE ACKNOWLEDGMENT

The undersigned Assignee acknowledges that it has reviewed the attached Warrant and by its signature below it hereby represents and warrants that it is an "accredited investor" as defined in Rule 501(a) of Regulation D promulgated under the Securities Act of 1933, as amended, and agrees to be bound by the terms and conditions of the Warrant as of the date hereof, including Section 5 thereof.

Signature: _____
By: _____
Its: _____

Address:

SECURITIES PURCHASE AGREEMENT

This Securities Purchase Agreement (this “*Agreement*”) is dated as of October 24, 2022 (the “*Effective Date*”), among Gritstone bio, Inc., a Delaware corporation (the “*Company*”), and each purchaser identified on the signature pages hereto (each a “*Purchaser*” and collectively the “*Purchasers*”).

WHEREAS, the Company and the Purchasers are executing and delivering this Agreement in reliance upon the exemption from securities registration afforded by Section 4(a)(2) of the Securities Act of 1933, as amended (the “*Securities Act*”), and Rule 506 of Regulation D as promulgated by the United States Securities and Exchange Commission (the “*Commission*”) under the Securities Act.

WHEREAS, each Purchaser wishes to purchase, and the Company wishes to sell, upon the terms and conditions stated in this Agreement, (i) shares of the Company’s Common Stock (the “*Shares*”) and/or (ii) pre-funded warrants in the form attached hereto as **Exhibit B** to purchase shares of Common Stock (each, a “*Warrant*” and collectively, the “*Warrants*”). The Shares, Warrants and Warrant Shares are collectively referred to herein as the “*Securities*.”

WHEREAS, in connection with the offering and sale of the Shares and the Warrants, the Company has entered into engagement letters, each dated October 17, 2022, with each of Piper Sandler & Co. and Evercore Group L.L.C. (the “*Placement Agents*”).

NOW, THEREFORE, in consideration of the mutual covenants contained in this Agreement, and for other good and valuable consideration the receipt and adequacy of which are hereby acknowledged, the Company and each Purchaser agree as follows:

1. DEFINITIONS

1.1 Definitions. In addition to the terms defined elsewhere in this Agreement, the following terms have the meanings set forth in this Section 1.1:

“*Closing*” means the closing of the purchase and sale of the Securities on the Closing Date pursuant to Section 2.1 of this Agreement.

“*Closing Date*” means October 27, 2022.

“*Common Stock*” means the common stock of the Company, \$0.0001 par value per share, and any other class of securities into which such securities may hereafter be reclassified or changed into.

“*Effectiveness Date*” means the date the Resale Registration Statement pursuant to Section 4 of this Agreement has been declared effective by the Commission.

“**Exchange Act**” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“**GAAP**” means U.S. generally accepted accounting principles consistently applied.

“**Investment Company Act**” means the Investment Company Act of 1940, as amended.

“**Material Adverse Effect**” means a circumstance that (i) could reasonably be expected to have a material adverse effect on the performance of this Agreement or the consummation of any of the transactions contemplated hereby or (ii) could reasonably be expected to have a material adverse effect on the condition (financial or otherwise), prospects, earnings, business or properties of the Company and any subsidiary (as defined below) taken as a whole.

“**Nasdaq**” means the Nasdaq Global Select Market.

“**Reporting Period**” means the period commencing on the Closing Date and ending on the date that no Registrable Shares are outstanding.

“**Resale Registration Statement**” means a registration statement or registration statements of the Company filed under the Securities Act pursuant to Section 4 hereof.

“**Rule 144**” means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

“**SEC Reports**” means collectively all reports, schedules, forms, statements and other documents required to be filed by the Company under the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, since January 1, 2020 (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein).

“**Share Purchase Price**” means \$2.26 per share.

“**Short Sales**” means all “short sales” as defined in Rule 200 of Regulation SHO of the Exchange Act, but shall be deemed to not include the location and/or reservation of borrowable shares of Common Stock.

“**subsidiary**” means any individual or entity the Company wholly-owns or controls, or in which the Company, directly or indirectly, owns a majority of the voting stock or similar voting interest, in each case that would be disclosable pursuant to Item 601(b)(21) of Regulation S-K promulgated under the Securities Act.

“**Trading Day**” means a day on which the Common Stock is traded on Nasdaq.

“**Transaction Documents**” means this Agreement, and any other documents or agreements executed and delivered to the Purchasers in connection with the transactions contemplated hereunder.

“**Warrant Purchase Price**” means \$2.26 per share, of which \$2.2599 per share will be paid at Closing.

“**Warrant Shares**” means the shares of Common Stock issuable upon exercise of the Warrants.

2. PURCHASE AND SALE

2.1 Closing.

(a) At the Closing, upon the terms set forth herein, the Company hereby agrees to issue and sell to certain Purchasers, and such Purchasers agree to purchase from the Company, severally and not jointly, the number of Shares set forth opposite such Purchaser’s name on **Exhibit A** hereto, at a purchase price equal to the Share Purchase Price per share of Common Stock.

(b) At the Closing, upon the terms set forth herein, the Company hereby agrees to issue and sell to certain Purchasers, and such Purchasers agree to purchase from the Company, severally and not jointly, the Warrants set forth opposite such Purchaser’s name on **Exhibit A** hereto, at a purchase price equal to the Warrant Purchase Price per Warrant Share.

(c) At the Closing, each Purchaser shall deliver to the Company via wire transfer of immediately available funds equal to the purchase price set forth opposite such Purchaser’s name on **Exhibit A** hereto, and the Company shall deliver to each Purchaser its respective Securities in the amounts set forth opposite such Purchaser’s name on **Exhibit A** hereto, deliverable at the Closing on the Closing Date in accordance with Section 2.2 of this Agreement. The Closing shall occur at 10:00 a.m. (New York City Time) on the Closing Date or such other time and location as the parties shall mutually agree.

2.2 Deliveries; Closing Conditions.

(a) At the Closing, the Company will deliver or cause to be delivered to each Purchaser certificate(s) or book-entry shares, at the Purchaser’s option, representing the Shares purchased by such Purchaser, registered in such Purchaser’s name. Such delivery shall be against payment of the purchase price therefor by such Purchaser by wire transfer of immediately available funds to the Company in accordance with the Company’s written wire instructions.

(b) At the Closing, the Company will deliver or cause to be delivered to each Purchaser the Warrant purchased by such Purchaser, registered in such Purchaser’s name. Such delivery shall be against payment of the purchase price therefor by such Purchaser by wire transfer of immediately available funds to the Company in accordance with the Company’s written wire instructions.

(c) The respective obligations of the Company, on the one hand, and the Purchasers, on the other hand, hereunder in connection with the Closing are subject to the following conditions being met:

(i) the accuracy in all material respects on the Closing Date of the representations and warranties contained herein (unless made as of a specified date therein) of the Company (with respect to the obligations of the Purchasers) and the Purchasers (with respect to the obligations of the Company);

(ii) all obligations, covenants and agreements of the Company (with respect to the obligations of the Purchasers) and the Purchasers (with respect to the obligations of the Company) required to be performed at or prior to the Closing Date shall have been performed in all material respects;

(iii) there shall have been no Material Adverse Effect with respect to the Company since the date hereof;

(iv) Purchasers shall have received a certificate of the Secretary of the Company (a "*Secretary's Certificate*"), dated as of the Closing Date in form and substance reasonably satisfactory to the Purchasers;

(v) Purchasers shall have received a certificate signed by the Chief Executive Officer of the Company (an "*Officer's Certificate*"), dated as of the Closing Date in form and substance reasonably satisfactory to the Purchasers;

(vi) Purchasers shall have received an opinion of Latham & Watkins LLP, counsel for the Company ("*Company Counsel*"), dated as of the Closing Date, in a form reasonably satisfactory to the Purchasers; and

(vii) each of the Company's executive officers and directors (in their capacities in such positions) shall enter into a lock-up agreement for a period not to exceed 90 days from the Closing Date.

3. REPRESENTATIONS AND WARRANTIES

3.1 Representations and Warranties of the Company. Assuming the accuracy of the representations and warranties of the Purchasers set forth in Section 3.2 of this Agreement and except as set forth in the SEC Reports, which disclosures serve to qualify these representations and warranties in their entirety, the Company represents and warrants to the Purchasers and the Placement Agents that the statements contained in this Section 3.1 are true and correct as of the date hereof and as of the Closing Date:

(a) The Company was not and is not an Ineligible Issuer (as defined in Rule 405), without taking account of any determination by the Commission pursuant to Rule 405 that it is not necessary that the Company be considered an Ineligible Issuer.

(b) The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the State of Delaware, with full corporate power and authority to own, lease and operate its properties and conduct its business, to execute and deliver this Agreement and the Warrants and to issue, sell and deliver the Securities as contemplated herein.

(c) The Company is duly qualified to do business as a foreign corporation and is in good standing in the State of California, which is the only jurisdiction where the ownership or leasing of its properties or the conduct of its business requires such qualification, except where the failure to be so qualified and in good standing would not, individually or in the aggregate, have a Material Adverse Effect.

(d) The Shares and Warrant Shares have been duly and validly authorized and, when issued and delivered against payment therefor as provided herein, will be duly and validly issued, fully paid and non-assessable and free of statutory and contractual preemptive rights, rights of first refusal and similar rights; the Shares and Warrant Shares, when issued and delivered against payment therefor as provided herein, will be free of any restriction upon the voting thereof pursuant to the Delaware General Corporation Law or the Company's charter or bylaws or any agreement or other instrument to which the Company is a party. The Warrants have been duly authorized by the Company and when executed and delivered by the Company will be valid and binding agreements of the Company, enforceable against the Company in accordance with their terms, except as the enforcement thereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting the rights and remedies of creditors or by general equitable principles; the Warrant Shares have been duly authorized and validly reserved for issuance upon exercise of the Warrants; the issuance of the Warrants is not subject to any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase the Warrants.

(e) This Agreement has been duly authorized, executed and delivered by the Company and constitutes the lawful, valid and legally binding obligation of the Company, enforceable in accordance with its terms, except as enforceability may be limited by bankruptcy, insolvency or similar laws affecting the rights of creditors generally and general equitable principles.

(f) Neither the Company nor any subsidiary is in breach or violation of or in default under (nor has any event occurred which, with notice, lapse of time or both, would result in any breach or violation of, constitute a default under or give the holder of any indebtedness (or a person acting on such holder's behalf) the right to require the repurchase, redemption or repayment of all or a part of such indebtedness under) (A) its respective charter or bylaws, or (B) any indenture, mortgage, deed of trust, bank loan or credit agreement or other evidence of indebtedness, or any license, lease, contract or other agreement or instrument to which it is a party or by which it or any of its properties may be bound or affected, or (C) any applicable federal, state, local or foreign law, regulation or rule, or (D) any applicable rule or regulation of any self-regulatory organization or other non-governmental regulatory authority (including, without limitation, the rules and regulations of Nasdaq), or (E) any decree, judgment or order applicable to it or any of its properties, except, in the case of the foregoing clauses (B), (C), (D) and (E), for any such breach, violation, default or event that would not, individually or in the aggregate, have a Material Adverse Effect.

(g) Neither the Company nor any subsidiary is and, after giving effect to the offering and sale of the Securities and the application of the proceeds thereof as described in Section 5.4 of this Agreement, none of them will be, an “investment company” or an entity “controlled” by an “investment company,” as such terms are defined in the Investment Company Act.

(h) The execution, delivery and performance of this Agreement, the issuance and sale of the Securities and the consummation of the transactions contemplated hereby will not conflict with, result in any breach or violation of or constitute a default under (nor constitute any event which, with notice, lapse of time or both, would result in any breach or violation of, constitute a default under or give the holder of any indebtedness (or a person acting on such holder’s behalf) the right to require the repurchase, redemption or repayment of all or a part of such indebtedness under) (or result in the creation or imposition of a lien, charge or encumbrance on any property or assets of the Company or any subsidiary pursuant to) (A) the charter or bylaws of the Company or any subsidiary, or (B) any indenture, mortgage, deed of trust, bank loan or credit agreement or other evidence of indebtedness, or any license, lease, contract or other agreement or instrument to which the Company or any subsidiary is a party or by which either of them or any of their respective properties may be bound or affected, or (C) any applicable federal, state, local or foreign law, regulation or rule, or (D) any applicable rule or regulation of any self-regulatory organization or other non-governmental regulatory authority (including, without limitation, the rules and regulations of Nasdaq), or (E) any decree, judgment or order applicable to the Company or any subsidiary or any of their respective properties, except, in the case of the foregoing clauses (B), (C), (D) and (E), for any such conflict, breach, violation, default or event that would not, individually or in the aggregate, have a Material Adverse Effect.

(i) No approval, authorization, consent or order of or filing with any federal, state, local or foreign governmental or regulatory commission, board, body, authority or agency, or of or with any self-regulatory organization or other non-governmental regulatory authority (including, without limitation, Nasdaq) having jurisdiction over the Company, or approval of the stockholders of the Company, is required in connection with the issuance and sale of the Securities or the consummation by the Company of the transactions contemplated hereby, other than (i) any necessary qualification under the securities or blue sky laws of the various jurisdictions in which the Securities are being offered, (ii) any listing applications and related consents or any notices required by Nasdaq in the ordinary course of the offering of the Securities, (iii) filings with the Commission under the Securities Act or (iv) filings with the Commission on Form 8-K with respect to this Agreement.

(j) The Company is authorized under its Certificate of Incorporation to issue 300,000,000 shares of Common Stock. The Company’s disclosure of its issued and outstanding capital stock in its most recent SEC Report containing such disclosure was accurate in all material respects as of the date indicated in such SEC Report. Since the date indicated in such SEC Report, there has not been any change the Company’s capital stock, other than as a result of the exercise of stock options or the award of stock options or restricted stock units in the ordinary course of business pursuant to the Company’s stock-based compensation plans described in the SEC

Reports. All of the issued and outstanding shares of the Company's capital stock have been duly authorized and validly issued and are fully paid, nonassessable and none of such shares were issued in violation of any pre-emptive rights and such shares were issued in compliance in all material respects with applicable state and federal securities law and any rights of third parties. Except for stock options and restricted stock units approved pursuant to Company stock-based compensation plans described in the SEC Reports and warrants described in the SEC Reports, there are no outstanding warrants, options, convertible securities or other rights, agreements or arrangements of any character under which the Company is or may be obligated to issue any equity securities of any kind and except as contemplated by this Agreement. There are no voting agreements, buy-sell agreements, option or right of first purchase agreements or other agreements of any kind among the Company and any of the security holders of the Company relating to the securities of the Company held by them. The issuance and sale of the Securities hereunder will not obligate the Company to issue shares of Common Stock or other securities to any other Person (other than the Purchasers) and will not result in the adjustment of the exercise, conversion, exchange or reset price of any outstanding security. Other than pursuant to this Agreement, (i) no person has the right, contractual or otherwise, to cause the Company to issue or sell to it any shares of Common Stock or shares of any other capital stock or other equity interests of the Company, (ii) no person has any preemptive rights, resale rights, rights of first refusal or other rights to purchase any shares of Common Stock or shares of any other capital stock of or other equity interests in the Company and (iii) no person has the right to act as an underwriter or as a financial advisor to the Company in connection with the offer and sale of the Securities; no person has the right, contractual or otherwise, to cause the Company to register under the Securities Act any shares of Common Stock or shares of any other capital stock of or other equity interests in the Company, or to include any such shares or interests in the Resale Registration Statement or the offering contemplated by this Agreement, except any such right that has been validly waived in writing as of the date of this Agreement, copies of such waivers to have been made available to you; no person has the right, contractual or otherwise, to cause the Company to register under the Securities Act any shares of Common Stock or shares of any other capital stock of or other equity interests in the Company, or to include any such shares or interests in any other offering of securities of the Company.

(k) Each of the Company and each subsidiary has all necessary licenses, authorizations, consents and approvals and has made all necessary filings required under any applicable law, regulation or rule, and has obtained all necessary licenses, authorizations, consents and approvals from other persons, in order to conduct their respective businesses, except where failure to have, make or obtain the same would not, individually or in the aggregate, have a Material Adverse Effect; neither the Company nor any subsidiary is in violation of, or in default under, or has received notice of any proceedings relating to revocation or modification of, any such license, authorization, consent or approval or any federal, state, local or foreign law, regulation or rule or any decree, order or judgment applicable to the Company or any subsidiary, except where such violation, default, revocation or modification would not, individually or in the aggregate, have a Material Adverse Effect.

(l) The Company's Common Stock is registered under Section 12 of the Exchange Act. The Company has filed all SEC Reports on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Exchange Act and, in each case, to the rules promulgated thereunder, as applicable, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(m) The financial statements included in the SEC Reports, together with the related notes and schedules, present fairly the financial position of the Company as of the dates indicated and the results of operations, cash flows and changes in stockholders' equity of the Company for the periods specified and have been prepared in compliance in all material respects with the requirements of the Securities Act and Exchange Act and in conformity with U.S. generally accepted accounting principles applied on a consistent basis during the periods involved, except as otherwise disclosed therein and, in the case of unaudited, interim financial statements, subject to normal year-end audit adjustments and the exclusion of certain footnotes.

(n) There are no actions, suits, claims, investigations or proceedings pending to which the Company or any subsidiary or, to the Company's knowledge, any of their respective directors or officers is or would be a party or of which any of their respective properties is or would be subject at law or in equity, before or by any federal, state, local or foreign governmental or regulatory commission, board, body, authority or agency, or before or by any self-regulatory organization or other non-governmental regulatory authority (including, without limitation, the Nasdaq), except any such action, suit, claim, investigation or proceeding which, if resolved adversely to the Company or any subsidiary, would not, individually or in the aggregate, have a Material Adverse Effect (assuming, with respect to any such action, suit, claim, investigation or proceeding to which the Company or any subsidiary is a party, that such action, suit, claim, investigation or proceeding was resolved adversely to the Company or any subsidiary, as the case may be); and, to the Company's knowledge, no such actions, suits, claims, investigations or proceedings are threatened or contemplated.

(o) Ernst & Young LLP, who have certified certain financial statements of the Company and delivered their report with respect to the audited financial statements included in the SEC Reports, are independent public accountants with respect to the Company within the meaning of the Securities Act and the applicable published rules and regulations thereunder.

(p) Each stock option granted under any equity incentive plan of the Company (each, a "**Stock Plan**") was granted with a per share exercise price no less than the fair market value per share of Common Stock on the grant date of such option, and no such grant involved any "back-dating" or similar practice with respect to the effective date of such grant, each such option (i) was granted in compliance with applicable law and with the applicable Stock Plan(s), (ii) was duly approved by the board of directors (or a duly authorized committee thereof or by an executive officer pursuant to Section 157(c) of the Delaware General Corporation Law) of the Company and (iii) has been properly accounted for in the Company's financial statements in accordance with U.S. generally accepted accounting principles and disclosed in the Company's filings with the Commission.

(q) Subsequent to the date of this Agreement, there has not been (i) any material adverse change, or any development that would be reasonably expected to result in a material adverse change, in the business, properties, management, financial condition or results of operations of the Company and any subsidiary taken as a whole, (ii) any transaction to which the Company is a party which is material to the Company and any subsidiary taken as a whole, (iii) any obligation or liability, direct or contingent (including any off-balance sheet obligations), incurred by the Company or any subsidiary, which is material to the Company and any subsidiary taken as a whole, (iv) any change in the capital stock or outstanding indebtedness of the Company or any subsidiary (other than the issuance of shares of Common Stock upon exercise of stock options or vesting of restricted stock units granted under Stock Plans in existence on the date hereof and the grant of awards under Stock Plans in existence on the date hereof, in each case in the ordinary course of business) or (v) any dividend or distribution of any kind declared, paid or made on the capital stock of the Company.

(r) Each of the Company and each subsidiary has good title to all personal property, free and clear of all liens, claims, security interest or other encumbrances, except those that do not materially interfere with the use or proposed use of such property by the Company or any subsidiary, respectively, or as would not materially or adversely affect the value of such property; neither the Company nor any subsidiary own any real property; all the real property held under lease by the Company or any subsidiary is held thereby under valid, subsisting and enforceable leases.

(s) Except as would not, individually or in the aggregate, have a Material Adverse Effect, (i) the Company or any subsidiary owns the inventions, patent applications, patents, trademarks (both registered and unregistered), tradenames, service names, copyrights, trade secrets and other proprietary information (collectively, "**Intellectual Property**") described in the SEC Reports as being owned by it and owns or has obtained valid and enforceable licenses for, or other rights to use, all Intellectual Property used in, or necessary for, the conduct of the businesses of the Company and any subsidiary as currently conducted or as proposed to be conducted (collectively, "**Company Intellectual Property**"), except as enforceability may be limited by bankruptcy, insolvency or similar laws affecting the rights of creditors generally and general equitable principles; (ii) there are no third parties who have, or, to the Company's knowledge, will be able to establish, rights to use any Company Intellectual Property that is owned or purported to be owned by the Company or any subsidiary, other than any co-owner of any patent or patent application constituting Intellectual Property who is listed as such on the records of the U.S. Patent and Trademark Office (the "**PTO**"), and, to the Company's knowledge, no third party has any ownership interest in or to any Company Intellectual Property that is exclusively licensed to the Company or any subsidiary, except for, and to the extent of, the ownership rights of the owners of the Company Intellectual Property which the SEC Reports disclose is licensed to the Company or any subsidiary; (iii) to the Company's knowledge, there is no infringement, misappropriation or other violation by any third parties of any Company Intellectual Property owned by or exclusively licensed to the Company or any subsidiary; (iv) neither the Company nor any subsidiary has received any notice from, and there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by, others challenging the Company's or any subsidiary's rights in or to any Company Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; (v) neither the Company nor any subsidiary has received any notice from, and there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by, others challenging the validity,

enforceability or scope of any Company Intellectual Property; and (vi) neither the Company nor any subsidiary has received any notice from, and there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by, others that the Company or any subsidiary infringes, misappropriates or otherwise violates, or would, upon the commercialization of any product or service described in the SEC Reports as under development, infringe, misappropriate or violate, any Intellectual Property of others.

(t) Neither the Company nor any subsidiary is engaged in any unfair labor practice; except for matters which would not, individually or in the aggregate, have a Material Adverse Effect, (i) there is (A) no unfair labor practice complaint pending or, to the Company's knowledge, threatened against the Company or any subsidiary before the National Labor Relations Board, and no grievance or arbitration proceeding arising out of or under collective bargaining agreements is pending or, to the Company's knowledge, threatened, (B) no strike, labor dispute, slowdown or stoppage pending or, to the Company's knowledge, threatened against the Company or any subsidiary and (C) no union representation dispute currently existing concerning the employees of the Company or any subsidiary, (ii) to the Company's knowledge, no union organizing activities are currently taking place concerning the employees of the Company or any subsidiary and (iii) there has been no violation of any federal, state, local or foreign law relating to discrimination in the hiring, promotion or pay of employees, any applicable wage or hour laws or any provision of the Employee Retirement Income Security Act of 1974, as amended, or the rules and regulations promulgated thereunder concerning the employees of the Company or any subsidiary.

(u) The Company and each subsidiary and their respective properties, assets and operations are in compliance with, and the Company and any subsidiary hold all permits, authorizations and approvals required under, Environmental Laws (as defined below), except to the extent that failure to so comply or to hold such permits, authorizations or approvals would not, individually or in the aggregate, have a Material Adverse Effect; there are no past, present or, to the Company's knowledge, reasonably anticipated future events, conditions, circumstances, activities, practices, actions, omissions or plans that would reasonably be expected to give rise to any material costs or liabilities to the Company or any subsidiary under, or to interfere with or prevent compliance by the Company or any subsidiary with, Environmental Laws; except as would not, individually or in the aggregate, have a Material Adverse Effect, neither the Company nor any subsidiary (i) is the subject of any investigation, (ii) has received any notice or claim, (iii) is a party to or affected by any pending or, to the Company's knowledge, threatened action, suit or proceeding, (iv) is bound by any judgment, decree or order or (v) has entered into any agreement, in each case relating to any alleged violation of any Environmental Law or any actual or alleged release or threatened release or cleanup at any location of any Hazardous Materials (as defined below) (as used herein, "**Environmental Law**" means any federal, state, local or foreign law, statute, ordinance, rule, regulation, order, decree, judgment, injunction, permit, license, authorization or other binding requirement, or common law, relating to health, safety or the protection, cleanup or restoration of the environment or natural resources, including those relating to the distribution, processing, generation, treatment, storage, disposal, transportation, other handling or release or threatened release of Hazardous Materials, and "**Hazardous Materials**" means any material (including, without limitation, pollutants, contaminants, hazardous or toxic substances or wastes) that is regulated by or may give rise to liability under any Environmental Law).

(v) All tax returns required to be filed by the Company or any subsidiary have been timely filed, and all taxes and other assessments of a similar nature (whether imposed directly or through withholding) including any interest, additions to tax or penalties applicable thereto due or claimed to be due from such entities have been timely paid, other than those being contested in good faith and for which adequate reserves have been provided, except to the extent failure to file such return or make such payments would not, individually or in the aggregate, have a Material Adverse Effect.

(w) The Company maintains insurance covering the properties, operations, personnel and businesses of the Company and any subsidiary as the Company reasonably deems adequate to insure against such losses and risks in accordance with customary industry practice to protect the Company and any subsidiary and their respective businesses; all such insurance is fully in force on the date hereof and will be fully in force at the time of purchase; the Company has no reason to believe that it will not be able to renew any such insurance as and when such insurance expires or obtain similar coverage at reasonable cost from similar insurers.

(x) The Company (i) does not have any material lending or other relationship with any bank or lending affiliate of either Placement Agent and (ii) does not intend to use any of the proceeds from the sale of the Securities hereunder to repay any outstanding debt owed to any affiliate of either Placement Agent.

(y) Neither the Company nor any subsidiary has sent any communication or received any written communication regarding termination of, or intent not to renew, any of the contracts or agreements referred to or described in the SEC Reports, and no such termination or non-renewal has been threatened by the Company or any subsidiary or, to the Company's knowledge, threatened in writing by any other party to any such contract or agreement.

(z) The Company has established and maintains a system of internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

(aa) The Company has established and maintains "disclosure controls and procedures" (as such term is defined in Rules 13a-15 and 15d-15 under the Exchange Act) that have been designed to ensure that material information relating to the Company is made known to the Company's principal executive officer and principal financial officer by others within those entities; and such disclosure controls and procedures are effective. The Company maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) that (i) has been designed by the Company's principal executive officer and principal financial officer, or under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and (ii) is sufficient to provide reasonable assurance that (A) transactions are executed in accordance with management's

general or specific authorization, (B) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain accountability for assets, (C) access to assets is permitted only in accordance with management's general or specific authorization, and (D) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company is not aware of any material weaknesses in its internal control over financial reporting (it being understood that this subsection shall not require the Company to comply with Section 404 of the Sarbanes Oxley Act of 2002 (the "**Sarbanes-Oxley Act**") as of an earlier date than it would otherwise be required to so comply under applicable law).

(bb) Each "forward-looking statement" (within the meaning of Section 27A of the Securities Act or Section 21E of the Exchange Act) contained or incorporated by reference in the SEC Reports has been made or reaffirmed with a reasonable basis and in good faith.

(cc) All statistical or market-related data included in the SEC Reports are based on or derived from sources that the Company reasonably believes to be reliable and accurate, and the Company has obtained the written consent to the use of such data from such sources to the extent required.

(dd) Neither the Company nor any subsidiary nor any of their respective directors or officers, affiliates or controlling persons has taken, directly or indirectly, without giving effect to activities by either Placement Agent, any action designed to or that would constitute or that might reasonably be expected to cause or result in, under the Exchange Act or otherwise, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

(ee) The interactive data in eXtensible Business Reporting Language included in the SEC Reports fairly presents the information called for in all material respects and has been prepared in accordance with the Commission's rules and guidelines applicable thereto.

(ff) Neither the Company nor any subsidiary nor, to the knowledge of the Company, any director, officer, agent, employee or affiliate of the Company or any subsidiary has taken any action, directly or indirectly, while acting on behalf of the Company or any subsidiary, that would result in a violation by such persons of the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the "**Foreign Corrupt Practices Act**") or any similar anti-corruption law; the Company is not aware of any such action, directly or indirectly, having been taken on behalf of the Company or any subsidiary; and the Company and any subsidiary and, to the knowledge of the Company, their respective affiliates have instituted and maintain policies and procedures designed to ensure continued compliance therewith.

(gg) The operations of the Company and any subsidiary are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements of the USA Patriot Act, the Bank Secrecy Act of 1970, as amended, the money laundering statutes of all jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "**Money Laundering Laws**"); and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator or non-governmental authority involving the Company or any subsidiary with respect to the Money Laundering Laws is pending or, to the Company's knowledge, threatened.

(hh) Neither the Company nor any subsidiary nor any of their respective affiliates, directors, officers, nor to the knowledge of the Company, any agent or employee of the Company or any subsidiary is subject to any sanctions administered or enforced by the Office of Foreign Assets Control (“**OFAC**”) of the United States Treasury Department, the U.S. Department of State, the United Nations Security Council, the European Union, Her Majesty’s Treasury or any other relevant sanctions authority; and the Company will not directly or indirectly use the proceeds of the offering of the Securities contemplated hereby, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity for the purpose of financing the activities of any person that is the target of sanctions administered or enforced by such authorities or in connection with any country or territory that is the target of country- or territory-wide OFAC sanctions (currently, Iran, Syria, Cuba, North Korea, and the Crimea Region of Ukraine).

(ii) The preclinical studies and clinical trials that are described in, or the results of which are referred to in, the SEC Reports were and, if still pending, are being conducted in all material respects in accordance with standard accepted medical and scientific research procedures and all applicable Laws, including, but not limited to, the Federal Food, Drug and Cosmetic Act (the “**FDCA**”) and its applicable implementing regulations at 21 C.F.R. Parts 50, 54, 56, 58 and 312; the descriptions of and information regarding the results of such studies, tests and trials, and the data and results derived therefrom, contained in the SEC Reports are accurate and complete, as of the date indicated, in all material respects and fairly present the data derived from such tests and trials, and neither the Company nor any subsidiary, after due inquiry, has any knowledge of any other studies, tests, trials, publications, presentations or other information relating to the Company’s products or product candidates not described in the SEC Reports the results of which reasonably call into question the results described or referred to in the SEC Reports; neither the Company nor any subsidiary has received any notices or other correspondence from the Food and Drug Administration of the U.S. Department of Health and Human Services or any committee thereof or from any other U.S. or foreign government or drug or medical device regulatory agency (collectively, the “**Regulatory Agencies**”) requiring or threatening the termination, suspension or material modification of any studies, tests or trials that are described or referred to in the SEC Reports; and the Company and any subsidiary have operated and currently are in compliance in all material respects with all applicable rules, regulations and policies of the Regulatory Agencies.

(jj) Except as would not, individually or in the aggregate, have or may reasonably be expected to have a Material Adverse Effect: (i) neither the Company nor any subsidiary has received any written notice of adverse filing, warning letter, untitled letter or other correspondence or notice from any Regulatory Agency or other relevant regulatory authorities, or any other court or arbitrator or federal, state, local or foreign governmental or regulatory authority, alleging or asserting material noncompliance with the Federal Food, Drug and Cosmetic Act (21 U.S.C. § 301 et seq.) or similar state, federal or foreign law or regulation; (ii) the Company and any subsidiary, and to the Company’s knowledge, their respective directors, officers, employees or agents, are and have been since January 1, 2020 in compliance in all material respects with applicable health care

laws, including without limitation, the Federal Food, Drug and Cosmetic Act (21 U.S.C. § 301 et seq.), the federal Anti-Kickback Statute (42 U.S.C. § 1320a-7b(b)), the Civil Monetary Penalties Law (42 U.S.C. § 1320a-7a), the U.S. Civil False Claims Act (31 U.S.C. § 3729 et seq.), 18 U.S.C. §§ 286 and 287, and the health care fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 (“**HIPAA**”) (42 U.S.C. § 1320d et seq.), the exclusion laws (42 U.S.C. § 1320a-7), Medicare (Title XVIII of the Social Security Act), Medicaid (Title XIX of the Social Security Act), HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. § 17921 et seq.), each as amended, and the regulations promulgated thereunder; and all other comparable local, state, federal, national, supranational and foreign laws, and the regulations promulgated thereunder, (collectively, “**Health Care Laws**”); (iii) neither the Company nor any subsidiary has received written notice of any ongoing claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any U.S. or non-U.S. federal, national, state, provincial, local, municipal, international government or other governmental, administrative or regulatory authority, governmental, administrative or regulatory agency or body, department, board, bureau, agency or instrumentality, court, tribunal, arbitrator or arbitral body (public or private) or self-regulatory organization (each, a “**Governmental Authority**”) or third party alleging that any product, operation or activity is in violation of any Health Care Laws or has any knowledge that any such Governmental Authority or third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding; (iv) neither the Company nor any subsidiary or any of their respective directors, officers, employees or, to the Company’s knowledge, agents, is or has been debarred, suspended or excluded, or has been convicted of any crime or engaged in any conduct that would result in a debarment, suspension or exclusion from any federal or state government health care program; and (v) the Company and any subsidiary are not a party to nor have any ongoing reporting obligations pursuant to any corporate integrity agreement, deferred prosecution agreement, monitoring agreement, consent decree, settlement order, plan of correction or similar agreement imposed by any Governmental Authority.

(kk) The Company has not received any notice from the Nasdaq Global Select Market regarding the delisting of the Common Stock and is in compliance with all continued listing standards of the Nasdaq Global Select Market.

(ll) No “bad actor” disqualifying event described in Rule 506(d)(1)(i)-(viii) of the 1933 Act (a “**Disqualification Event**”) is applicable to the Company or, to the Company’s knowledge, any Company Covered Person (as defined below), except for a Disqualification Event as to which Rule 506(d)(2)(ii–iv) or (d)(3), is applicable. “**Company Covered Person**” means, with respect to the Company as an “issuer” for purposes of Rule 506 promulgated under the 1933 Act, any person listed in the first paragraph of Rule 506(d)(1). Other than the Placement Agents, the Company is not aware of any Person (other than any Company Covered Person) that has been or will be paid (directly or indirectly) remuneration for solicitation of purchasers in connection with the sale of the Securities pursuant to this Agreement. The Company has complied, to the extent applicable, with its disclosure obligations under Rule 506(e), and has furnished to the Placement Agents a copy of any disclosures provided thereunder.

(mm) The Company shall file a Form D with respect to the Securities as required under Regulation D and, to the extent the Form D is not publicly available on the Commission's EDGAR reporting system, shall provide a copy thereof to each Purchaser promptly after such filing. The Company, on or before the Closing Date, shall take such action as the Company shall reasonably determine is necessary in order to obtain an exemption for or to qualify the Securities for sale to the Purchasers at the Closing, pursuant to this Agreement under applicable securities or blue sky laws of the states of the United States (or to obtain an exemption from such qualification), and, if requested by a Purchaser, shall provide evidence of any material action so taken to such Purchaser on or prior to the Closing Date. The Company shall make all filings and reports relating to the offer and sale of the Securities required under applicable securities or blue sky laws of the states of the United States following the Closing Date.

3.2 Representations, Warranties and Covenants of the Purchasers. Each Purchaser, for itself and for no other Purchaser, hereby represents, warrants and covenants to the Company and the Placement Agents as of the Closing:

(a) Each Purchaser represents and warrants that: (i) the Purchaser has all requisite legal and corporate or other power and capacity and has taken all requisite corporate or other action to execute and deliver this Agreement, to purchase the Securities and to carry out and perform all of its obligations under this Agreement; and (ii) this Agreement constitutes the legal, valid and binding obligation of the Purchaser, enforceable against the Purchaser in accordance with its terms, except (x) as limited by applicable bankruptcy, insolvency, reorganization or similar laws relating to or affecting the enforcement of creditors' rights generally and (y) as limited by equitable principles generally.

(b) At the time such Purchaser was offered the Securities, it was, and as of the date hereof it is, either: (i) an "accredited investor" as defined in Rule 501(a)(1), (a)(2), (a)(3), (a)(7) or (a)(8) under the Securities Act or (ii) a "qualified institutional buyer" as defined in Rule 144A(a) under the Securities Act. Purchaser is aware of the Company's business affairs and financial condition and has had access to and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. Purchaser has such business and financial experience as is required to give it the capacity to protect its own interests in connection with the purchase of the Securities. Purchaser acknowledges that it has had the opportunity to review the Company's filings with the Commission and has been afforded (i) the opportunity to ask such questions as it has deemed necessary of, and to receive answers from, representatives of the Company concerning the terms and conditions of the offering of the Securities and the merits and risks of investing in the Securities and (ii) the opportunity to obtain such additional information that the Company possesses or can acquire without unreasonable effort or expense that is necessary to make an informed investment decision with respect to the investment.

(c) Each Purchaser is purchasing the Securities, and, upon the exercise of the Warrants, will acquire the Warrant Shares issuable upon exercise of the Warrants, in each case for its own account, for investment purposes only, and not with a present view to, or for, resale, distribution or fractionalization thereof, in whole or in part, within the meaning of the Securities Act; provided, however, that by making the representations herein, such Purchaser does not agree to hold any of the Securities for any minimum or other specific term and reserves the right to dispose of the Securities at any time in accordance with or pursuant to a registration statement or an exemption under the Securities Act. Each Purchaser understands that its acquisition of the Securities has not been registered under the Securities Act or registered or qualified under any state securities law in reliance on specific exemptions therefrom, which exemptions may depend upon, among other things, the bona fide nature of each Purchaser's investment intent as expressed herein. Each Purchaser will not, directly or indirectly, offer, sell, pledge, transfer or otherwise dispose of (or solicit any offers to buy, purchase or otherwise acquire or take a pledge of) the Securities except in compliance with the Securities Act and the rules and regulations promulgated thereunder.

(d) Each Purchaser represents and acknowledges that it has not been solicited to offer to purchase or to purchase any Securities by means of any general solicitation or advertising within the meaning of Regulation D under the Securities Act.

(e) Each Purchaser represents that it is not a person of the type described in Section 506(d) of Regulation D under the Securities Act that would disqualify the Company from engaging in a transaction pursuant to Section 506 of Regulation D under the Securities Act.

(f) Each Purchaser understands that the Securities being offered and sold to it in reliance on specific exemptions from the registration requirements of United States federal and state securities laws and that the Company is relying in part upon the truth and accuracy of, and each Purchaser's compliance with, the representations, warranties, agreements, acknowledgements and understandings of each Purchaser set forth herein in order to determine the availability of such exemptions and the eligibility of each Purchaser to acquire the Securities. Each Purchaser further acknowledges and understands that the Securities may not be resold or otherwise transferred except in a transaction registered under the Securities Act or unless an exemption from such registration is available.

(g) The Purchaser understands that nothing in this Agreement or any other materials presented to the Purchaser in connection with the purchase and sale of the Securities constitutes legal, tax or investment advice. The Purchaser has consulted such legal, tax and investment advisors and made such investigations as the Purchaser, in its sole discretion, has deemed necessary or appropriate in connection with its purchase of the Securities. Such Purchaser understands that the Placement Agents have each acted solely as an agent of the Company in this placement of the Securities and such Purchaser has not relied on the business, legal, tax or investment advice of either Placement Agent or any of their agents, counsel or affiliates in making its investment decision hereunder, and confirms that none of such persons has made any representations or warranties to such Purchaser in connection with the transactions contemplated herein.

(h) During the time that the Purchaser was first contacted by the Company, either Placement Agent or any other person regarding the transactions contemplated hereby and ending immediately prior to the execution hereof, such Purchaser has not directly or indirectly, nor has any person acting on behalf of or pursuant to any understanding with the Purchaser, engaged in any purchases or sales of the Company's securities (including, without limitation, any Short Sales involving the Company's securities). Each Purchaser covenants that neither it nor any person acting on its behalf or pursuant to any understanding with it will engage in any purchases or sales of the Company's securities (including, without limitation, any Short Sales involving the Company's securities) prior to the time that the transactions contemplated by this Agreement are publicly disclosed.

(i) Purchaser has independently evaluated the merits of its decision to purchase Securities pursuant to this Agreement. Purchaser understands that nothing in this Agreement or any other materials presented to Purchaser in connection with the purchase and sale of the Securities constitutes legal, tax or investment advice.

(j) Purchaser will hold in confidence all information concerning this Agreement and the sale and issuance of the Securities until the Company has made a public announcement concerning this Agreement and the sale and issuance of the Securities, which shall be made not later than 9:00 am New York time on the first Trading Day immediately after the signing of this Agreement.

(k) Purchaser understands that no United States federal or state agency or any other government or governmental agency has passed upon or made any recommendation or endorsement of the Securities.

(l) Legend.

(i) Each Purchaser understands that the Securities shall bear a restrictive legend in substantially the following form (and a stop transfer order may be placed against transfer of the certificates for the Securities):

“THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR THE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES OR IN ANY OTHER JURISDICTION. THE SECURITIES REPRESENTED HEREBY MAY NOT BE OFFERED, SOLD OR TRANSFERRED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT FOR THE SECURITIES UNDER APPLICABLE SECURITIES LAWS UNLESS OFFERED, SOLD OR TRANSFERRED PURSUANT TO AN AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THOSE LAWS.”

(ii) The Company shall, at its sole expense, upon appropriate notice from any Purchaser stating that Registrable Shares have been sold pursuant to an effective Registration Statement, timely prepare and deliver certificates or book-entry shares representing the Securities to be delivered to a transferee pursuant to the Registration Statement, which certificates or book-entry shares shall be free of any restrictive legends and in such denominations and registered in such names as such Purchaser may request. Further, the Company shall, at its sole expense, cause its legal counsel or other counsel satisfactory to the transfer agent: (i) while the Registration Statement is effective, to issue to the transfer agent a “blanket” legal opinion to allow sales without restriction pursuant to the effective Registration Statement, and (ii) provide all other opinions as may reasonably be required by the transfer agent in connection with the removal of legends. A Purchaser may request that the Company remove, and the Company agrees to authorize the removal of, any legend from such Securities, following the delivery by a Purchaser to the Company or the Company’s transfer agent of a legended certificate representing such Securities: (i) following any sale of such Securities pursuant to Rule 144, (ii) if such Securities are eligible for sale under Rule 144(b)(1), or (iii) following the time that the Registration Statement is declared effective. If a legend removal request is made pursuant to the foregoing, the Company will, no later than two business days following the delivery by a Purchaser to the Company or the

Company's transfer agent of a legended certificate representing such Securities (or a request for legend removal, in the case of Securities issued in book-entry form), deliver or cause to be delivered to such Purchaser a certificate representing such Securities that is free from all restrictive legends or an equivalent book-entry position, as requested by the Purchaser. Certificates for Securities free from all restrictive legends may be transmitted by the Company's transfer agent to the Purchasers by crediting the account of the Purchaser's prime broker with the Depository Trust Company ("**DTC**") as directed by such Purchaser. The Company warrants that the Securities shall otherwise be freely transferable on the books and records of the Company as and to the extent provided in this Agreement. If a Purchaser effects a transfer of the Securities in accordance with Section 3.2(1)(ii), the Company shall permit the transfer and shall promptly instruct its transfer agent to issue one or more certificates or credit shares to the applicable balance accounts at DTC in such name and in such denominations as specified by such Purchaser to effect such transfer. Each Purchaser hereby agrees that the removal of the restrictive legend pursuant to this Section 3.2(1)(ii) is predicated upon the Company's reliance that such Purchaser will sell any such Securities pursuant to either the registration requirements of the Securities Act, including any applicable prospectus delivery requirements, or an exemption therefrom.

(m) If Purchaser is not a United States person (as defined by Section 7701(a)(30) of the Code), Purchaser hereby represents that it has satisfied itself as to the full observance of the laws of its jurisdiction in connection with any invitation to subscribe for the Securities or any use of this Agreement, including (a) the legal requirements within its jurisdiction for the purchase of the Securities, (b) any foreign exchange restrictions applicable to such purchase or acquisition, (c) any government or other consents that may need to be obtained, and (d) the income tax and other tax consequences, if any, that may be relevant to the purchase, holding, redemption, sale or transfer of the Securities. The Purchaser's subscription and payment for and continued beneficial ownership of the Securities will not violate any applicable securities or other laws of the Purchaser's jurisdiction.

4. REGISTRATION RIGHTS

4.1 Definitions. For the purpose of this Section 4:

(a) the term "**Resale Registration Statement**" shall mean any registration statement required to be filed by Section 4.2 below, and shall include any preliminary prospectus, final prospectus, exhibit or amendment included in or relating to such registration statements; and

(b) the term "**Registrable Shares**" means the (i) Shares and Warrant Shares, and (ii) any other shares of Common Stock issued as a dividend or other distribution with respect to, in exchange for, or in replacement of the Shares or Warrant Shares; provided, however, that a security shall cease to be a Registrable Share upon the earliest to occur of the following: (i) a Resale Registration Statement registering such security under the Securities Act has been declared or becomes effective and such security has been sold or otherwise transferred by the holder thereof

pursuant to and in a manner contemplated by such effective Resale Registration Statement, (ii) such security is sold pursuant to Rule 144 under circumstances in which any legend borne by such security relating to restrictions on transferability thereof, under the Securities Act or otherwise, is removed by the Company, (iii) such security is eligible to be sold pursuant to Rule 144 without condition or restriction, including without any limitation as to volume of sales, and without the Holder complying with any method of sale requirements or notice requirements under Rule 144, or (iv) such security shall cease to be outstanding following its issuance.

4.2 Registration Procedures and Expenses. The Company shall:

(a) use commercially reasonable efforts to file a Resale Registration Statement (the “**Mandatory Registration Statement**”) with the Commission on or before the date 30 days following the Closing Date (the “**Filing Date**”) to register all of the Registrable Shares on Form S-3 under the Securities Act (providing for shelf registration of such Registrable Shares under Commission Rule 415), and to provide each Purchaser with a copy of such draft Mandatory Registration Statement for review not less than two business days before filing;

(b) use its commercially reasonable efforts to cause such Mandatory Registration Statement to be declared effective within the earlier of (i) 30 days following the Filing Date (or, in the event the Staff reviews and has written comments to the Mandatory Registration Statement, within 120 days following the Closing Date) and (ii) the 10th business day after the date the Company is notified (orally or in writing, whichever is earlier) by the SEC that the Mandatory Registration Statement will not be “reviewed” or will not be subject to further comments from the Staff (the earlier of the foregoing or the applicable date set forth in Section 4.2(h), the “**Effectiveness Deadline**”), such efforts to include, without limiting the generality of the foregoing, preparing and filing with the Commission any financial statements or other information that is required to be filed prior to the effectiveness of such Mandatory Registration Statement;

(c) notwithstanding anything contained in this Agreement to the contrary, in the event that the Commission limits the amount of Registrable Shares or otherwise requires a reduction in the number of Registrable Shares that may be included and sold by the Purchasers in the Mandatory Registration Statement (in each case, subject to Section 4.3), then the Company shall prepare and file (i) within 10 business days of the first date or time that such excluded Registrable Shares may then be included in a Resale Registration Statement if the Commission shall have notified the Company that certain Registrable Shares were not eligible for inclusion in the Resale Registration Statement or (ii) in all other cases, within 20 days following the date that the Company becomes aware that such additional Resale Registration Statement is required (the “**Additional Filing Date**”), a Resale Registration Statement (any such Resale Registration Statement registering such excluded Registrable Shares, an “**Additional Registration Statement**” and, together with the Mandatory Registration Statement, a “**Resale Registration Statement**”) to register any Registrable Shares that have been excluded (or, if applicable, the maximum number of such excluded Registrable Shares that the Company is permitted to register for resale on such Additional Registration Statement consistent with Commission guidance), if any, from being registered on the Mandatory Registration Statement;

(d) use its commercially reasonable efforts to cause any such Additional Registration Statement to be declared effective as promptly as practicable following the Additional Filing Date, such efforts to include, without limiting the generality of the foregoing, preparing and filing with the Commission any financial statements or other information that is required to be filed prior to the effectiveness of any such Additional Registration Statement;

(e) prepare and file with the Commission such amendments and supplements to such Resale Registration Statements and the prospectus used in connection therewith as may be necessary to keep such Resale Registration Statements continuously effective and free from any material misstatement or omission to state a material fact therein until termination of such obligation as provided in Section 4.6 below, subject to the Company's right to suspend pursuant to Section 4.5;

(f) furnish to the Purchasers such number of copies of prospectuses in conformity with the requirements of the Securities Act and such other documents as the Purchasers may reasonably request, in order to facilitate the public sale or other disposition of all or any of the Registrable Shares by the Purchasers;

(g) file such documents as may be required of the Company for normal securities law clearance for the resale of the Registrable Shares in such states of the United States as may be reasonably requested by the Purchasers and use its commercially reasonable efforts to maintain such blue sky qualifications during the period the Company is required to maintain effectiveness of the Resale Registration Statements; provided, however, that the Company shall not be required in connection with this Section 4.2(g) to qualify as a foreign corporation or execute a general consent to service of process in any jurisdiction in which it is not now so qualified or has not so consented;

(h) upon notification by the Commission that the Resale Registration Statement will not be reviewed or is not subject to further review by the Commission, the Company shall within three business days following the date of such notification request acceleration of such Resale Registration Statement (with the requested effectiveness date to be not more than two business days later);

(i) upon notification by the Commission that the Resale Registration Statement has been declared effective by the Commission, the Company shall file the final prospectus under Rule 424 of the Securities Act ("**Rule 424**") within the applicable time period prescribed by Rule 424;

(j) advise the Purchasers promptly:

(i) of the effectiveness of the Resale Registration Statement or any post-effective amendments thereto;

(ii) of any request by the Commission for amendments to the Resale Registration Statement or amendments to the prospectus or for additional information relating thereto;

(iii) of the issuance by the Commission of any stop order suspending the effectiveness of the Resale Registration Statement under the Securities Act or of the suspension by any state securities commission of the qualification of the Registrable Shares for offering or sale in any jurisdiction, or the initiation of any proceeding for any of the preceding purposes; and

(iv) of the existence of any fact and the happening of any event that makes any statement of a material fact made in the Resale Registration Statement, the prospectus and amendment or supplement thereto, or any document incorporated by reference therein, untrue, or that requires the making of any additions to or changes in the Resale Registration Statement or the prospectus in order to make the statements therein not misleading;

(k) cause all Registrable Shares to be listed on each securities exchange, if any, on which equity securities by the Company are then listed; and

(l) bear all expenses in connection with the procedures in paragraphs (a) through (k) of this Section 4.2 and the registration of the Registrable Shares on such Resale Registration Statement and the satisfaction of the blue sky laws of such states.

4.3 Rule 415; Cutback.

If at any time the staff of the Commission (“**Staff**”) takes the position that the offering of some or all of the Registrable Shares in a Registration Statement is not eligible to be made on a delayed or continuous basis under the provisions of Rule 415 under the Securities Act or requires any Purchaser to be named as an “underwriter,” the Company shall (in consultation with legal counsel to the lead Purchaser) use its commercially reasonable efforts to persuade the Commission that the offering contemplated by the Registration Statement is a valid secondary offering and not an offering “by or on behalf of the issuer” as defined in Rule 415 and that none of the Purchasers is an “underwriter;” provided, that if the Commission or another regulatory agency requests that a Purchaser be identified as a statutory underwriter in the Registration Statement, Purchaser will have the opportunity to withdraw from the Registration Statement upon its prompt written request to the Company. In the event that, despite the Company’s commercially reasonable efforts and compliance with the terms of this Section 4.3, the Staff refuses to alter its position, the Company shall (i) remove from the Registration Statement such portion of the Registrable Shares (the “**Cut Back Shares**”) and/or (ii) agree to such restrictions and limitations on the registration and resale of the Registrable Shares as the Staff may require to assure the Company’s compliance with the requirements of Rule 415 (collectively, the “**SEC Restrictions**”); provided, however, that the Company shall not agree to name any Purchaser as an “underwriter” in such Registration Statement without the prior written consent of such Purchaser. Any cutback imposed on the Purchasers pursuant to this Section 4.3 shall be allocated among the Purchasers on a pro rata basis, unless the SEC Restrictions otherwise require or provide. No liquidated damages shall accrue as to any Cut Back Shares until such date as the Company is able to effect the registration of such Cut Back Shares in accordance with any SEC Restrictions (such date, the “**Restriction Termination Date**” of such Cut Back Shares). From and after the Restriction Termination Date applicable to any Cut Back Shares, all of the provisions of this Section 4 shall again be applicable to such Cut Back Shares; provided, however, that (x) the Filing Deadline for the Registration Statement including such Cut Back Shares shall be 10 business days after such Restriction Termination Date, and (y) the Effectiveness Deadline with respect to such Cut Back Shares shall be the 90th day immediately after the Restriction Termination Date or the 120th day if the Staff reviews such Registration Statement (but in any event no later than three business days from the Staff indicating it has no further comments on such Registration Statement).

4.4 Indemnification.

(a) The Company agrees to indemnify and hold harmless the Purchasers, and the partners, members, officers and directors of the Purchasers and each person, if any, who controls the Purchasers within the meaning of the Securities Act or the Exchange Act, from and against any losses, claims, damages or liabilities to which they may become subject (under the Securities Act or otherwise) insofar as such losses, claims, damages or liabilities (or actions or proceedings in respect thereof) arise out of, or are based upon, any material breach of this Agreement by the Company or any untrue statement or alleged untrue statement of a material fact contained in the Resale Registration Statement or any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading or arise out of any failure by the Company to fulfill any undertaking included in the Resale Registration Statement and the Company will, as incurred, reimburse the Purchasers, and their partners, members, officers, directors or controlling persons for any legal or other expenses reasonably incurred in investigating, defending or preparing to defend any such action, proceeding or claim; provided, however, that the Company shall not be liable in any such case to the extent that such loss, claim, damage or liability (collectively, "**Loss**") arises out of, or is based upon: (i) an untrue statement or omission or alleged untrue statement or omission made in such Resale Registration Statement in reliance upon and in conformity with written information furnished to the Company by or on behalf of the Purchasers, or their partners, members, officers, directors or controlling persons specifically for use in preparation of the Resale Registration Statement; or (ii) any breach of this Agreement by the Purchasers; provided further, however, that the Company shall not be liable to the Purchasers (or any partner, member, officer, director or controlling person of the Purchasers) to the extent that any such Loss is caused by an untrue statement or omission or alleged untrue statement or omission made in any preliminary prospectus if either (i) (A) any Purchaser failed to send or deliver a copy of the final prospectus with or prior to, or any Purchaser failed to confirm that a final prospectus was deemed to be delivered prior to (in accordance with Rule 172 of the Securities Act), the delivery of written confirmation of the sale by a Purchaser to the person asserting the claim from which such Loss resulted and (B) the final prospectus corrected such untrue statement or omission, (ii) (X) such untrue statement or omission is corrected in an amendment or supplement to the prospectus and (Y) having previously been furnished by or on behalf of the Company with copies of the prospectus as so amended or supplemented or notified by the Company that such amended or supplemented prospectus has been filed with the Commission, in accordance with Rule 172 of the Securities Act, any Purchaser thereafter fails to deliver such prospectus as so amended or supplemented, with or prior to or a Purchaser fails to confirm that the prospectus as so amended or supplemented was deemed to be delivered prior to (in accordance with Rule 172 of the Securities Act), the delivery of written confirmation of the sale by a Purchaser to the person asserting the claim from which such Loss resulted or (iii) a Purchaser sold Registrable Shares in violation of such Purchasers' covenant contained in Section 3.2 of this Agreement.

(b) The Purchasers agree, severally and not jointly, to indemnify and hold harmless the Company (and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, each officer of the Company who signs the Resale Registration Statement and each director of the Company), from and against any losses, claims, damages or liabilities to which the Company (or any such officer, director or controlling person) may become subject (under the Securities Act or otherwise), insofar as such losses, claims, damages or liabilities (or actions or proceedings in respect thereof) arise out of, or are based upon, any material breach of this Agreement by the Purchasers or untrue statement or alleged untrue statement of a material fact contained in the Resale Registration Statement (or any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading in each case, on the effective date thereof), if, and only to the extent, such untrue statement or omission or alleged untrue statement or omission was made in reliance upon and in conformity with written information furnished by or on behalf of the Purchasers specifically for use in preparation of the Resale Registration Statement, and the Purchasers, severally and not jointly, will reimburse the Company (and each of its officers, directors or controlling persons) for any legal or other expenses reasonably incurred in investigating, defending or preparing to defend any such action, proceeding or claim; provided, however, that in no event shall any indemnity under this Section 4.4(b) be greater in amount than the dollar amount of the proceeds received by the Purchasers upon the sale of such Registrable Shares.

(c) Promptly after receipt by any indemnified person of a notice of a claim or the beginning of any action in respect of which indemnity is to be sought against an indemnifying person pursuant to this Section 4.4, such indemnified person shall notify the indemnifying person in writing of such claim or of the commencement of such action, and, subject to the provisions hereinafter stated, in case any such action shall be brought against an indemnified person and such indemnifying person shall have been notified thereof, such indemnifying person shall be entitled to participate therein, and, to the extent that it shall wish, to assume the defense thereof, with counsel reasonably satisfactory to such indemnified person. After notice from the indemnifying person to such indemnified person of its election to assume the defense thereof, such indemnifying person shall not be liable to such indemnified person for any legal expenses subsequently incurred by such indemnified person in connection with the defense thereof; provided, however, that if there exists or shall exist a conflict of interest that would make it inappropriate in the reasonable judgment of the indemnified person for the same counsel to represent both the indemnified person and such indemnifying person or any affiliate or associate thereof, the indemnified person shall be entitled to retain its own counsel at the expense of such indemnifying person; provided, further, that no indemnifying person shall be responsible for the fees and expense of more than one separate counsel for all indemnified parties. The indemnifying party shall not settle an action without the consent of the indemnified party, which consent shall not be unreasonably withheld.

(d) If after proper notice of a claim or the commencement of any action against the indemnified party, the indemnifying party does not choose to participate, then the indemnified party shall assume the defense thereof and upon written notice by the indemnified party requesting advance payment of a stated amount for its reasonable defense costs and expenses, the indemnifying party shall advance payment for such reasonable defense costs and expenses (the “*Advance Indemnification Payment*”) to the indemnified party. In the event that the indemnified

party's actual defense costs and expenses exceed the amount of the Advance Indemnification Payment, then upon written request by the indemnified party, the indemnifying party shall reimburse the indemnified party for such difference; in the event that the Advance Indemnification Payment exceeds the indemnified party's actual costs and expenses, the indemnified party shall promptly remit payment of such difference to the indemnifying party.

(e) If the indemnification provided for in this Section 4.4 is held by a court of competent jurisdiction to be unavailable to an indemnified party with respect to any losses, claims, damages or liabilities referred to herein, the indemnifying party, in lieu of indemnifying such indemnified party thereunder, shall to the extent permitted by applicable law contribute to the amount paid or payable by such indemnified party as a result of such loss, claim, damage or liability in such proportion as is appropriate to reflect the relative fault of the indemnifying party on the one hand and of the indemnified party on the other, as well as any other relevant equitable considerations; provided, that in no event shall any contribution by an indemnifying party hereunder be greater in amount than the dollar amount of the proceeds received by such indemnifying party upon the sale of such Registrable Shares.

4.5 Prospectus Suspension. Each Purchaser acknowledges that there may be times when the Company must suspend the use of the prospectus forming a part of the Resale Registration Statement until such time as an amendment to the Resale Registration Statement has been filed by the Company and declared effective by the Commission, or until such time as the Company has filed an appropriate report with the Commission pursuant to the Exchange Act. Each Purchaser hereby covenants that it will not sell any Registrable Shares pursuant to said prospectus during the period commencing at the time at which the Company gives the Purchasers notice of the suspension of the use of said prospectus and ending at the time the Company gives the Purchasers notice that the Purchasers may thereafter effect sales pursuant to said prospectus; provided, that such suspension periods shall in no event exceed 30 days in any 12 month period and that, in the good faith judgment of the Company's board of directors, the Company would, in the absence of such delay or suspension hereunder, be required under state or federal securities laws to disclose any corporate development, a potentially significant transaction or event involving the Company, or any negotiations, discussions, or proposals directly relating thereto, in either case the disclosure of which would reasonably be expected to have a material adverse effect upon the Company or its stockholders.

4.6 Termination of Obligations. The obligations of the Company pursuant to Section 4.2 hereof shall cease and terminate, with respect to any Registrable Shares, upon the earlier to occur of (a) such time such Registrable Shares have been resold, or (b) such time as such Registrable Shares no longer remain Registrable Shares pursuant to Section 4.1(b) hereof.

4.7 Reporting Requirements.

(a) With a view to making available the benefits of certain rules and regulations of the Commission that may at any time permit the sale of the Shares to the public without registration or pursuant to a registration statement on Form S-3, the Company agrees to:

- (i) make and keep public information available, as those terms are understood and defined in Rule 144;

(ii) file with the Commission in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act; and

(iii) so long as a Purchaser owns Registrable Shares, to furnish to such Purchaser upon request (A) a written statement by the Company as to whether it is in compliance with the reporting requirements of Rule 144, the Securities Act and the Exchange Act, or whether it is qualified as a registrant whose securities may be resold pursuant to Commission Form S-3, (B) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company and (C) such other information as may be reasonably requested to permit the Purchaser to sell such securities pursuant to Rule 144.

4.8 Blue Sky. The Company shall obtain and maintain all necessary blue sky law permits and qualifications, or secured exemptions therefrom, required by any state for the offer and sale of Registrable Shares.

5. OTHER AGREEMENTS OF THE PARTIES

5.1 Integration. Except as contemplated by the terms of this Agreement, the Company shall not sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in Section 2 of the Securities Act) that would be integrated with the offer or sale of the Shares such that the rules of Nasdaq would require shareholder approval of this transaction prior to the closing of such other transaction unless shareholder approval is obtained before the closing of such subsequent transaction.

5.2 Securities Laws Disclosure; Publicity. Except as set forth below, no public release or announcement concerning the transactions contemplated hereby shall be issued by the Company or the Purchasers without the prior written consent of the Company (in the case of a release or announcement by the Purchasers) or the Purchasers (in the case of a release or announcement by the Company) (which consents shall not be unreasonably withheld), except as such release or announcement may be required by law or the applicable rules or regulations of any securities exchange or securities market, in which case the Company or the Purchasers, as the case may be, shall allow the Purchasers or the Company, as applicable, to the extent reasonably practicable in the circumstances, reasonable time to comment on such release or announcement in advance of such issuance. The Company shall: (a) by 9:00 a.m. (New York City time) on the business day following the execution and delivery of this Agreement, issue a press release disclosing the material terms of the transactions contemplated hereby promptly following the execution and delivery hereof which shall have been previously reviewed by counsel for the Placement Agents (the "**Press Release**"), and (b) by 5:30 p.m. (New York City time) on the fourth Trading Day following the date hereof, file a Current Report on Form 8-K disclosing the material terms of the transactions contemplated hereby which shall have been previously reviewed by counsel for the Placement Agents (the "**Form 8-K**"). Other than the information required to be included in the Press Release, neither the Company or any of its Subsidiaries, or any of their respective officers, directors, employees, Affiliates or agents, including, without limitation, any Placement Agent, has provided any Purchaser with material non-public information. In addition, effective upon the filing of the Press Release, the Company acknowledges and agrees that any and all confidentiality or similar obligations under any agreement, whether written or oral, between the Company or any of its Subsidiaries, or any of their respective officers, directors, employees, Affiliates or agents, including, without limitation, any Placement Agent, on the one hand, and any of the Purchasers or any of their affiliates, on the other hand, shall terminate and be of no further force or effect. Subject to the foregoing, neither the Company nor any Purchaser shall issue any press releases or any other public statements with respect to the transactions contemplated hereby except as may be reviewed and approved by the Company and counsel to the Placement Agents; provided, however, that the Company shall be entitled, without the prior approval of any Purchaser, to make any press release or other public disclosure as is required by applicable law and regulations; provided, further, that no such press release or other public statement shall identify any Purchaser without such Purchaser's prior consent, which consent shall not be unreasonably withheld or conditioned.

5.3 Reservation of Common Stock. As of the date hereof, the Company has reserved and the Company shall continue to reserve and keep available at all times, free of preemptive rights, a sufficient number of shares of Common Stock for the purpose of enabling the Company to issue the Shares and the Warrant Shares that are issuable upon the exercise of the Warrants.

5.4 Exculpation. Each Purchaser (for itself and for each account for which it is acquiring the Securities) has carefully reviewed any disclosure documents used in the transactions contemplated hereby and has been furnished with all other materials that it considers relevant to an investment in the Securities, has had a full opportunity to ask questions of and receive answers from the Company or any person or persons acting on behalf of the Company concerning the terms and conditions of the transactions contemplated hereby, and no statement or printed material which is contrary to the disclosure documents has been made or given to the purchaser by or on behalf of the Company. Each Purchaser acknowledges and agrees that the Placement Agents shall have no liability or obligation (including without limitation, for or with respect to any losses, claims, damages, obligations, penalties, judgments, awards, liabilities, costs, expenses or disbursements incurred by such Purchaser, the Company or any other person or entity), whether in contract, tort or otherwise, to the Purchaser, or to any person claiming through such Purchaser, in respect of the transactions contemplated hereby. Each Purchaser acknowledges and agrees that the Placement Agents shall have no liability or obligation on or with respect to the accuracy or completeness, as of any date, of any information set forth in, or any omission from, any valuation or other materials that may have been provided or made available to the Purchaser in connection with the transactions contemplated hereby. Each Purchaser is not relying upon, and has not relied upon, any statement, representation or warranty made by any person, including, without limitation, Piper Sandler & Co. and Evercore Group L.L.C., except for the statements, representations and warranties contained in the Agreement. Piper Sandler & Co. and Evercore Group L.L.C. shall be a third-party beneficiary of, and shall be entitled to rely on, the representations and warranties described in this Section 5.4.

6. MISCELLANEOUS

6.1 Termination. This Agreement may be terminated by any Purchaser, as to such Purchaser's obligations hereunder only and without any effect whatsoever on the obligations between the Company and the other Purchasers, by written notice to the other parties, if the Closing has not been consummated within ten calendar days from the Effective Date through no fault of such Purchaser; provided, however, that no such termination will affect the right of any party to sue for any breach by the other party (or parties), and, upon such termination pursuant to this Section 6.1, any purchase price wired to the Company by a Purchaser shall be promptly returned to the Purchaser, but in no event later than the second Trading Day following such termination.

6.2 Fees and Expenses. Except as expressly set forth in the Transaction Documents to the contrary, each party shall pay the fees and expenses of its advisers, counsel, accountants and other experts, if any, and all other expenses incurred by such party incident to the negotiation, preparation, execution, delivery and performance of this Agreement. Notwithstanding the foregoing, the Company shall pay all transfer agent fees, stamp taxes and other taxes and duties levied in connection with the delivery of any Securities to the Purchasers.

6.3 Entire Agreement. The Transaction Documents, together with the exhibits and schedules thereto, contain the entire understanding of the parties with respect to the subject matter hereof and supersede all prior agreements and understandings, oral or written, with respect to such subject matter, which the parties acknowledge have been merged into such documents, exhibits and schedules.

6.4 Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective upon actual receipt via mail, courier or confirmed email by the party to whom such notice is required to be given. The address for such notices and communications shall be as set forth on the signature pages attached hereto.

6.5 Amendments; Waivers. No provision of this Agreement may be waived or amended except in a written instrument signed, in the case of an amendment, by (a) the Company and (b) Purchasers holding at least a majority of the Securities sold in the Closing (as a single class on an as-converted to Common Stock basis) and then-held by a Purchaser or, in the case of a waiver, by the party against whom enforcement of any such waived provision is sought; provided, however, that in no event may any Purchaser's Share Purchase Price or Warrant Purchase Price or any information with respect to such Purchaser set forth on Exhibit A hereto be amended without the written consent of such Purchaser. Notwithstanding the foregoing, this Agreement may not be amended and the observance of any term of this Agreement may not be waived with respect to any Purchaser without the written consent of such Purchaser unless such amendment or waiver applies to all Purchasers in the same fashion. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any party to exercise any right hereunder in any manner impair the exercise of any such right.

6.6 Headings. The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof.

6.7 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their permitted successors and assigns. The Company may not assign this Agreement or any rights or obligations hereunder without the prior written consent of each Purchaser (other than by merger). The Purchasers may not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Company (other than by merger).

6.8 Third-Party Beneficiaries. Each Placement Agent shall be the third party beneficiary of the representations and warranties of the Company in Section 3.1 and the representations, warranties and covenants of the Purchasers in Section 3.2 of this Agreement. This Agreement is intended for the benefit of the parties hereto and each Placement Agent and their respective permitted successors and assigns and is not for the benefit of, nor may any provision hereof be enforced by, any other person, except as otherwise set forth in this Section 6.8.

6.9 Governing Law. All questions concerning the construction, validity, enforcement and interpretation of the Transaction Documents shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement and any other Transaction Documents (whether brought against a party hereto or its respective affiliates, directors, officers, shareholders, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the State of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the State of New York for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to

it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law.

6.10 Execution. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to each other party, it being understood that the parties need not sign the same counterpart. Counterparts may be delivered via facsimile, electronic mail (including any electronic signature covered by the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act, the Electronic Signatures and Records Act or other applicable law, e.g., www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

6.11 Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use their commercially reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

6.12 Rescission and Withdrawal Right. Notwithstanding anything to the contrary contained in (and without limiting any similar provisions of) any of the other Transaction Documents, whenever any Purchaser exercises a right, election, demand or option under a Transaction Document and the Company does not timely perform its related obligations within the periods therein provided, then such Purchaser may rescind or withdraw, in its sole discretion from time to time upon written notice to the Company, any relevant notice, demand or election in whole or in part without prejudice to its future actions and rights.

6.13 Replacement of Securities. If any certificate or instrument evidencing any Securities is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation thereof (in the case of mutilation), or in lieu of and substitution therefor, a new certificate or instrument, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction and customary and reasonable indemnity or bond, if requested. The applicant for a new certificate or instrument under such circumstances shall also pay any reasonable third-party costs (including customary indemnity) associated with the issuance of such replacement Shares.

6.14 Remedies. The Company shall be entitled to exercise all rights provided herein or granted by law, including recovery of damages, for any breach of the Transaction Documents.

6.15 Independent Nature of Purchasers' Obligations and Rights. The obligations of each Purchaser under any Transaction Document are several and not joint with the obligations of any other Purchaser, and no Purchaser shall be responsible in any way for the performance or non-performance of the obligations of any other Purchaser under any Transaction Document. Nothing contained herein or in any other Transaction Document, and no action taken by any Purchaser pursuant thereto, shall be deemed to constitute the Purchasers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Purchasers are in any way acting in concert or as a group with respect to such obligations or the transactions contemplated by the Transaction Documents. Each Purchaser shall be entitled to independently protect and enforce its rights, including without limitation, the rights arising out of this Agreement or out of the other Transaction Documents, and it shall not be necessary for any other Purchaser to be joined as an additional party in any proceeding for such purpose.

6.16 Construction. The parties agree that each of them and/or their respective counsel has reviewed and had an opportunity to revise the Transaction Documents and, therefore, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of the Transaction Documents or any amendments hereto.

6.17 WAIVER OF JURY TRIAL. IN ANY ACTION, SUIT, OR PROCEEDING IN ANY JURISDICTION BROUGHT BY ANY PARTY AGAINST ANY OTHER PARTY, THE PARTIES EACH KNOWINGLY AND INTENTIONALLY, TO THE GREATEST EXTENT PERMITTED BY APPLICABLE LAW, HEREBY ABSOLUTELY, UNCONDITIONALLY, IRREVOCABLY AND EXPRESSLY WAIVES FOREVER TRIAL BY JURY.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

GRITSTONE BIO, INC.

By: /s/ Andrew Allen

Name: Andrew Allen

Title: President and Chief Executive Officer

Address for Notice:

5959 Horton Street, Suite 300

Emeryville, CA 94608

Attention: Chief Executive Officer; General Counsel

Email: andrew@gritstone.com

With a copy to (which shall not constitute notice):

Latham & Watkins LLP

140 Scott Drive

Menlo Park, CA 94025

Attention: Brian J. Cuneo

Email: brian.cuneo@lw.com

In Witness Whereof, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

Altium Capital Management, LP

By: /s/ Mark Gottlieb

Name: Mark Gottlieb

Title: COO

Address for Notice:

152 West 57th St, 20th Floor

New York, NY 10019

Shares Beneficially

Owned Prior to

Initial Closing: 0

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

Gilead Sciences, Inc.

By: /s/ Devang Bhuva _____

Name: Devang Bhuva

Title: SVP, Corporate Development

Date: 10/24/2022

Address for Notice:

333 Lakeside Drive

Foster City, CA 94404

Shares Beneficially

Owned Prior to

Initial Closing: 1,624,136 ordinary shares

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

Hercules Capital, Inc.

By: /s/ Zhuo Huang

Name: Zhuo Huang

Title: Associate General Counsel

Address for Notice:

Hercules Capital, Inc.
400 Hamilton Avenue, Suite 310
Palo Alto, CA 94301

Shares Beneficially

Owned Prior to

Initial Closing: 0 _____

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

Invus Public Equities, L.P.

By: /s/ Khalil Barrage

Name: Khalil Barrage

Title: Vice President of the General Partner

Address for Notice:

750 Lexington Ave, 30th FL

New York, NY 10022

Shares Beneficially

Owned Prior to

Initial Closing: 750,000

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

Point72 Associates, LLC

By: /s/ Vincent Tortorella

Name: Vincent Tortorella

Title: Authorized Person

Address for Notice:

72 Cummings Point Road

Stamford, CT 06902

Shares Beneficially

Owned Prior to

Initial Closing: intentionally left blank

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

RedCo II Master Fund, L.P.

By: RedCo II (GP), LLC, its general partner

By: /s/ Joshua Garcia

Name: Joshua Garcia

Title: Authorized Signatory

Address for Notice:

c/o Redmile Group, LLC
One Letterman Drive, Suite D3-300
San Francisco, CA 94129

Shares Beneficially

Owned Prior to

Initial Closing: 0

Exhibit A**Closing Schedule**

Investor Name	Number of Shares to be Purchased	Aggregate Purchase Price of Shares	Number of Warrants to be Purchased	Aggregate Purchase Price of Warrants	Aggregate Purchase Price of Securities
Altium Capital Management, LP	663,716	\$ 1,499,998.16	0	\$ 0.00	\$ 1,499,998.16
Gilead Sciences, Inc.	1,769,911	\$ 3,999,998.86	0	\$ 0.00	\$ 3,999,998.86
Hercules Capital, Inc.	442,477	\$ 999,998.02	0	\$ 0.00	\$ 999,998.02
Invus Public Equities, L.P.	1,106,194	\$ 2,499,998.44	0	\$ 0.00	\$ 2,499,998.44
Point72 Associates, LLC	2,654,867	\$ 5,999,999.42	0	\$ 0.00	\$ 5,999,999.42
RedCo II Master Fund, L.P.	0	\$ 0.00	13,274,923	\$29,999,998.49	\$29,999,998.49
Total	6,637,165	\$14,999,992.90	13,274,923	\$29,999,998.49	\$44,999,991.39

Exhibit B

Form of Warrant

NEITHER THIS SECURITY NOR THE SECURITIES FOR WHICH THIS SECURITY IS EXERCISABLE HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS.

WARRANT NO. 2022-[●]

NUMBER OF SHARES: [●]
(subject to adjustment hereunder)

DATE OF ISSUANCE: October 27, 2022

EXPIRATION DATE: The first date on which no shares of Common Stock are issuable upon a cash exercise of this Warrant

PRE-FUNDED WARRANT TO PURCHASE SHARES OF
COMMON STOCK OF
GRITSTONE BIO, INC.

This Warrant (the "Warrant") is issued by Gritstone bio, Inc., a Delaware corporation (the "Company"), to [●], or its registered assigns (including any successors or assigns, the "Holder"), and is subject to the terms and conditions set forth below. The Warrant is being issued pursuant to that certain Securities Purchase Agreement, dated as of October 24, 2022, among the Company and the purchasers signatory thereto, as amended and/or restated from time to time (the "Purchase Agreement"). Capitalized terms used and not otherwise defined herein shall have the meanings set forth in the Purchase Agreement.

1. EXERCISE OF WARRANT.

(a) Number and Exercise Price of Warrant Shares; Expiration Date. Subject to the terms and conditions set forth herein, the Holder is entitled to purchase from the Company up to [●] shares of the Company's Common Stock, \$0.0001 par value per share (the "Common Stock") (as adjusted from time to time pursuant to the provisions of this Warrant) (the "Warrant Shares") until this Warrant is exercised in full. The aggregate exercise price of this Warrant of \$[●], except for a nominal exercise price of \$0.0001 per Warrant Share, was paid to the Company on or prior to the date of issuance of this Warrant, and, consequently, no additional consideration (other than the nominal exercise price of \$0.0001 per Warrant Share) shall be required to be paid by the Holder to effect any exercise of this Warrant. The Holder shall not be entitled to return or refund of all, or any portion, of such pre-paid aggregate exercise price under any circumstance or for any reason whatsoever, including in the event this Warrant shall not have been exercised prior to the Expiration Date. The remaining unpaid exercise price per share of Common Stock under this Warrant shall be \$0.0001, subject to adjustment as provided herein (the "Exercise Price").

(b) Method of Exercise. While this Warrant remains outstanding and exercisable in accordance with Section 1(a) above, the Holder may exercise this Warrant in whole or in part in accordance with Section 5 by either:

(1) wire transfer to the Company or cashier's check drawn on a United States bank made payable to the order of the Company, or

(2) exercising of the right to credit the Exercise Price against the Fair Market Value (as defined below) of the Warrant Shares (as defined below) at the time of exercise (the "Net Exercise") pursuant to Section 1(c).

(c) Net Exercise. At any time the Holder may elect to exercise this Warrant by Net Exercise pursuant to this Section 1(c). At any time that this Warrant may be exercised by Net Exercise pursuant to this Section 1(c), if the Company shall receive written notice from the Holder at the time of exercise of this Warrant that the Holder elects to Net Exercise the Warrant, the Company shall deliver to such Holder (without payment by the Holder of any exercise price in cash) that number of Warrant Shares computed using the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where

X = The number of Warrant Shares to be issued to the Holder.

Y = The number of Warrant Shares purchasable under this Warrant or, if only a portion of the Warrant is being exercised, the portion of the Warrant being cancelled (at the date of such calculation).

A = The Fair Market Value of one share of Common Stock (at the date of such calculation).

B = The Exercise Price (as adjusted to the date of such calculations).

The "Fair Market Value" of one share of Common Stock shall mean (x) the last reported sale price and, if there are no sales, the last reported bid price, of the Common Stock on the last trading day prior to the date of exercise on the trading market on which the Common Stock is listed as reported by Bloomberg Financial Markets (or a comparable reporting service of national reputation selected by the Company and reasonably acceptable to the Holder if Bloomberg Financial Markets is not then reporting sales prices of the Common Stock) (collectively, "Bloomberg"), or (y) if the foregoing does not apply, the last sales price of such security in the over-the-counter market on the pink sheets by Pink Sheets LLC (formerly the National Quotation Bureau, Inc.) (the "pink sheets") or bulletin board for such security as reported by Bloomberg, or if no sales price is so reported, the last bid price of the Common Stock as reported by Bloomberg or (z) if the fair market value cannot be calculated on any of the foregoing bases, the fair market value determined by the Company's Board of Directors in good faith.

(d) Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the Warrant Shares, the Company shall promptly issue to the Holder the number of Warrant Shares that are not disputed.

(e) Deemed Exercise. In the event that immediately prior to the close of business on the Expiration Date, the Fair Market Value of one share of Common Stock (as determined in accordance with Section 1(c) above) is greater than the then applicable Exercise Price, this Warrant shall be deemed to be automatically exercised on a net exercise issue basis pursuant to Section 1(c) above, and the Company shall deliver the applicable number of shares of Common Stock to the Holder pursuant to the provisions of Section 1(c) above and this Section 1(e). Notwithstanding anything to the contrary contained in this Section 1(e), to the extent that the Holder's right to receive shares of Common Stock upon such a net exercise would result in the Holder and its affiliates exceeding the Beneficial Ownership Limitation, if applicable pursuant to Section 5(c) herein, then the Holder shall not be entitled to such shares of Common Stock to the extent of the Beneficial Ownership Limitation (and shall not be entitled to beneficial ownership of such shares of Common Stock (and beneficial ownership) to the extent of any such excess) and the portion of such shares of Common Stock shall be held in abeyance for the benefit of the Holder until such time or times, if ever, as its right thereto would not result in the Holder and its affiliates exceeding the Beneficial Ownership Limitation, at which time or times the Holder shall be granted such shares of Common Stock to the same extent as if there had been no such limitation).

2. CERTAIN ADJUSTMENTS.

(a) Adjustment of Number of Warrant Shares and Exercise Price. The number and kind of Warrant Shares purchasable upon exercise of this Warrant and the Exercise Price shall be subject to adjustment from time to time as follows:

(1) Subdivisions, Combinations and Other Issuances. If the Company shall at any time after the Date of Issuance but prior to the Expiration Date subdivide its shares of capital stock of the same class as the Warrant Shares, by split-up or otherwise, or combine such shares of capital stock, or issue additional shares of capital stock as a dividend with respect to any shares of such capital stock, the number of Warrant Shares issuable on the exercise of this Warrant shall forthwith be proportionately increased in the case of a subdivision or stock dividend, or proportionately decreased in the case of a combination. Appropriate adjustments shall also be made to the Exercise Price payable per share, but the aggregate Exercise Price payable for the total number of Warrant Shares purchasable under this Warrant (as adjusted) shall remain the same. Any adjustment under this Section 2(a)(1) shall become effective at the close of business on the date the subdivision or combination becomes effective, or as of the record date of such dividend, or in the event that no record date is fixed, upon the making of such dividend.

(2) Reorganizations or Mergers. In case of any reclassification, capital reorganization or change in the capital stock of the Company (other than as a result of a subdivision, combination or stock dividend provided for in Section 2(a)(1) above) that occurs after the Date of Issuance, then as a condition of such reclassification, reorganization or change, lawful provision shall be made, and duly executed documents evidencing the same from the Company or its successor shall be delivered to the Holder, so that the Holder shall thereafter have the right at any time prior to the expiration of this Warrant to purchase, at a total price equal to that payable

upon the exercise of this Warrant, the kind and amount of shares of stock and/or other securities or property (including, if applicable, cash) receivable in connection with such reclassification, reorganization or change by a holder of the same number and type of securities as were purchasable as Warrant Shares by the Holder immediately prior to such reclassification, reorganization or change. In any such case, appropriate provisions shall be made with respect to the rights and interest of the Holder so that the provisions hereof shall thereafter be applicable with respect to any shares of stock or other securities or property deliverable upon exercise hereof, and appropriate adjustments shall be made to the Exercise Price payable hereunder, provided the aggregate Exercise Price shall remain the same (and, for the avoidance of doubt, this Warrant shall be exclusively exercisable for such shares of stock and/or other securities or property from and after the consummation of such reclassification or other change in the capital stock of the Company).

(3) Rights Upon Distribution of Assets. If the Company shall declare or make any dividend, other distribution of its assets (or rights to acquire its assets) or evidences of its indebtedness to holders of shares of Common Stock generally (which dividend or other distribution has not already been given to the Holder with respect to the Warrant Shares), by way of return of capital or otherwise not addressed by this Section 2 above (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, subdivision, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a “Distribution”), at any time after the issuance of this Warrant and prior to the Expiration Date, then in each such case the Holder shall be entitled (subject to the following proviso) to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant, including, without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution. Notwithstanding anything to the contrary contained herein, to the extent that the Holder’s right to participate in any such Distribution would result in the Holder and its affiliates exceeding the Beneficial Ownership Limitation, if applicable pursuant to Section 5(c) herein, then the Holder shall not be entitled to participate in such Distribution to the extent of the Beneficial Ownership Limitation (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such Distribution (and beneficial ownership) to the extent of any such excess) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time or times, if ever, as its right thereto would not result in the Holder and its affiliates exceeding the Beneficial Ownership Limitation, at which time or times the Holder shall be granted such Distribution (and any Distributions declared or made on such initial Distribution or on any subsequent Distribution held similarly in abeyance) to the same extent as if there had been no such limitation).

(4) Purchase Rights. If at any time the Company grants, issues or sells any options, convertible securities or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of Common Stock (the “Purchase Rights”), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant, including without limitation, the Beneficial

Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder and the other Attribution Parties (as defined in Section 5(c)) exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such Purchase Right (and beneficial ownership) to such extent) and such Purchase Right to such extent shall be held in abeyance for the benefit of the Holder until such time or times as its right thereto would not result in the Holder and the other Attribution Parties exceeding the Beneficial Ownership Limitation, at which time or times the Holder shall be granted such right (and any Purchase Right granted, issued or sold on such initial Purchase Right or on any subsequent Purchase Right held similarly in abeyance) to the same extent as if there had been no such limitation).

(b) Notice of Adjustment. When any adjustment is required to be made in the number or kind of shares purchasable upon exercise of the Warrant or in the Exercise Price, the Company shall promptly notify the Holder of such event and of the number of Warrant Shares or other securities or property thereafter purchasable upon exercise of this Warrant.

(c) Calculations. No adjustment in the Exercise Price shall be required unless such adjustment would require an increase or decrease of at least \$0.01 in such price; provided, however, that any adjustment which by reason of this Section 2(c) is not required to be made shall be carried forward and taken into account in any subsequent adjustments under this Section 2. All calculations under this Section 2 shall be made by the Company in good faith and shall be made to the nearest cent or to the nearest one hundredth of a share, as applicable. No adjustment need be made for a change in the par value or no par value of the Company's Common Stock.

(d) Treatment of Warrant upon a Change of Control.

(1) If, at any time while this Warrant is outstanding, there is a Change of Control (as defined below), then the Holder shall have the right thereafter to receive, upon exercise of this 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 this Warrant (the "Alternate Consideration"). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Change of Control, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of 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 shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Change of Control. Any successor to the Company or surviving entity in such Change of Control shall issue to the Holder a new warrant substantially in the form of this Warrant and consistent with the foregoing provisions and evidencing the Holder's right to purchase the Alternate Consideration for the aggregate Exercise Price upon exercise thereof.

(2) Notice of a Change of Control. The Company shall provide written notice to the Holder of a Change of Control reasonably promptly after public announcement thereof (and, in any event, not less than twenty (20) trading days prior to the consummation of such Change of Control) and such notice shall include (i) the projected date of consummation of the Change of Control to the extent known at the time such notice is delivered and (ii) the expected consideration to be received by the Company's stockholders in such Change of Control.

(3) As used in this Warrant, a "Change of Control" shall mean (i) a merger or consolidation of the Company with another entity, in which the Company is not the survivor or the stockholders of the Company immediately prior to such merger or consolidation do not own, directly or indirectly, at least 50% of the voting securities of the surviving entity, (ii) the consummation of a stock purchase agreement or other business combination of the Company with another Person whereby such other Person acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock purchase agreement or other business combination), (iii) the sale, assignment, transfer, conveyance or other disposal of all or substantially all of the properties or assets or all or a majority of the outstanding voting securities of the Company, (iv) a purchase, tender or exchange offer accepted by the holders of a majority of the outstanding voting shares of capital stock of the Company directly or indirectly, in one or more related transactions, (v) a "person" or "group" (as these terms are used for purposes of Section 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) is or shall become the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of at least a majority of the outstanding shares of Common Stock of the Company through a stock purchase agreement or other business combination (including, without limitation, a reorganization, reclassification, spin off or scheme of arrangement) with another person, or (vi) the Company has elected to reorganize, recapitalize or reclassify its Common Stock (other than to change domicile).

3. NO STOCKHOLDER RIGHTS. Until the exercise of this Warrant, the Holder shall not have, nor exercise, any rights as a stockholder of the Company (including without limitation the right to notification of stockholder meetings or the right to receive any notice or other communication concerning the business and affairs of the Company), except as expressly provided in this Warrant.

4. COVENANT TO PERFORM; NON-CIRCUMVENTION. The Company hereby covenants and agrees that the Company will at all times in good faith carry out all the provisions of this Warrant and will not by amendment of its certificate of incorporation, bylaws or other organizational documents or through a Change of Control, dissolution, sale of assets or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant. Without limiting the generality of the foregoing, the Company (i) shall not increase the par value of any shares of Common Stock receivable upon the exercise of this Warrant above the Exercise Price then in effect, (ii) shall take such actions as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable shares of Common Stock upon the exercise of this Warrant, and (iii) shall, so long as this Warrant is outstanding, take action necessary to reserve and keep available out of its authorized and unissued shares of Common Stock solely for the purpose of effecting the exercise of this Warrant, 100% of the number of shares of Common Stock issuable upon exercise of this Warrant then outstanding.

5. MECHANICS OF EXERCISE.

(a) Delivery of Warrant Shares Upon Exercise. This Warrant may be exercised by the Holder hereof upon the delivery of a Notice of Exercise (the “Exercise Notice”) attached hereto as Exhibit A properly completed and duly executed by the Holder hereof, at the office of the Company designated for such purpose together with this Warrant and payment in full of the Exercise Price (unless the Holder has elected to Net Exercise) then in effect with respect to the number of Warrant Shares as to which the Warrant is being exercised. This Warrant shall be deemed to have been exercised immediately prior to the close of business on the date of its surrender for exercise as provided above, and the person entitled to receive the Warrant Shares issuable upon such exercise shall be treated for all purposes as the holder of such shares of record as of the close of business on such date. Notwithstanding anything herein to the contrary (although the Holder may surrender the Warrant to, and receive a replacement Warrant from, the Company), the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) trading days of the date the final Exercise Notice is delivered to the Company. Execution and delivery of the Exercise Notice with respect to less than all of the Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. On or before the second (2nd) trading day following the date on which the Company has received each of the Exercise Notice and the aggregate Exercise Price (or confirmation from the Company of the number of shares of Warrant Shares issuable in connection with a duly executed and delivered notice of Net Exercise), the Company shall transmit by facsimile an acknowledgment of confirmation of receipt of the Exercise Notice to the Company’s transfer agent (“Transfer Agent”). The Company shall deliver any objection to the Exercise Notice on or before the second trading day following the date on which the Company has received the Exercise Notice. On or before the second (2nd) trading day following the date on which the Company has received the Exercise Notice and the aggregate Exercise Price (the “Share Delivery Date”), the Company shall (X) provided that the Transfer Agent is participating in The Depository Trust Company (“DTC”) Fast Automated Securities Transfer Program and either (i) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by the Holder or (ii) this Warrant is being exercised via cashless exercise and Rule 144 is available, upon the request of the Holder, credit such aggregate number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the Holder or its designee’s balance account with DTC through its Deposit Withdrawal Agent Commission system, or (Y) if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, or (i) there is not an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by the Holder and (ii) this Warrant is being exercised via cashless exercise and Rule 144 is not available, upon the request of the Holder, issue and dispatch by first class mail, postage prepaid, to the address as specified in the Exercise Notice, a certificate, registered in the Company’s share register in the name of the Holder or its designee, for the number of shares of Common Stock to which the Holder is entitled pursuant to such exercise. Upon delivery of the Exercise Notice and the payment of the aggregate Exercise Price (or a duly executed and delivered notice of Net Exercise), the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date such Warrant Shares are credited to the Holder’s DTC

account or the date of delivery of the certificates or book-entry position evidencing such Warrant Shares, as the case may be. The Company shall pay any and all taxes (other than taxes based upon the income of the Holder) which may be payable with respect to the issuance and delivery of Warrant Shares upon exercise of this Warrant; provided, that the Company shall not be required to pay any tax that may be payable in respect of any transfer involved in the issue and delivery of shares of Common Stock in any name other than that of the Holder, in either case with respect to any income or transfer tax due by the Holder with respect to such shares of Common Stock issued upon exercise of this Warrant. The Company shall not have any duty or obligation to take any action under any section of this Agreement that requires the payment of taxes and/or charges unless and until it is satisfied that all such payments have been made.

(b) Company's Failure to Timely Deliver Securities. If the Company shall fail for any reason or for no reason to issue to the Holder by the Share Delivery Date in compliance with the terms of this Section 5, a certificate or book entry position for the number of shares of Common Stock to which the Holder is entitled and register such shares of Common Stock on the Company's share register or to credit the Holder's balance account with DTC for such number of shares of Common Stock to which the Holder is entitled upon the Holder's exercise of this Warrant, and if on or after such trading day the Holder purchases (in an open market transaction or otherwise, provided such purchases shall be made in a commercially reasonable manner at prevailing market prices) shares of Common Stock to deliver in satisfaction of a sale by the Holder of shares of Common Stock issuable upon such exercise that the Holder anticipated receiving from the Company, then the Company shall, within two (2) trading days after the Holder's request and in the Holder's discretion, either (i) pay cash to the Holder in an amount equal to the Holder's total purchase price (including commercially reasonable brokerage commissions, if any) for the shares of Common Stock so purchased (the "Buy-In Price"), at which point the Company's obligation to deliver such certificate or evidence of book entry position (and to issue such Warrant Shares) shall terminate, or (ii) pay cash to the Holder in an amount equal to the excess (if any) of the Buy-In Price over the product of (A) such number of shares of Common Stock, times (B) the price at which the sell order giving rise to such purchase obligation was executed (assuming such sale was executed on commercially reasonable terms at prevailing market prices) and, at the option of the holder, either (x) promptly honor its obligation to deliver to the Holder a certificate or certificates or evidence of book entry position representing such Warrant Shares or (y) reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded).

(c) Holder's Exercise Limitation. Notwithstanding anything to the contrary contained in this Warrant, this Warrant shall not be exercisable by the Holder pursuant to Section 1 or otherwise, and any such exercise shall be void ab initio, to the extent (but only to the extent) that after giving effect to such issuance after exercise as set forth on the applicable Exercise Notice, the Holder (together with the Holder's affiliates, and any other persons acting as a group together with the Holder or any of the Holder's affiliates (such person "Attribution Parties")), would beneficially own in excess of 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issued upon exercise of this Warrant (the "Beneficial Ownership Limitation"). Notwithstanding the foregoing, the Holder shall have the right to increase or decrease the Beneficial Ownership Limitation (to an amount not to exceed 9.9% of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this

Warrant, with any increase to be effective only upon the Holder providing the Company with prior written notice of such increase, which shall be effective 61 days after delivery of such notice to the Company. To the extent the above limitation applies, the determination of whether this Warrant shall be exercisable (vis-à-vis other convertible, exercisable or exchangeable securities owned by the Holder or any of its Attribution Parties) and of which such securities shall be exercisable (as among all such securities owned by the Holder or any of its Attribution Parties) shall, subject to such Beneficial Ownership Limitation, be determined by the Holder, and the Company shall have no responsibility for determining the accuracy of the Holder's determination. No prior inability to exercise this Warrant pursuant to this paragraph shall have any effect on the applicability of the provisions of this paragraph with respect to any subsequent determination of exercisability. For purposes of the calculation of the Beneficial Ownership Limitation, the aggregate number of shares of Common Stock beneficially owned by the Holder and its Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining nonexercised portion of this Warrant beneficially owned by the Holder or any of its Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other convertible notes or convertible preferred stock or warrants) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Attribution Parties. Except as set forth in the preceding sentence, for purposes of this section, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 5(c), in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Securities and Exchange Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Company's transfer agent setting forth the number of shares of Common Stock outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 5(c) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant. Upon the written request of the Holder, the Company shall within three (3) trading days confirm orally or in writing to the Holder the number of shares of Common Stock then outstanding, including by virtue of any prior conversion or exercise of convertible or exercisable securities into Common Stock, including, without limitation, pursuant to this Warrant or securities issued pursuant to the Purchase Agreement.

6. CERTIFICATE OF ADJUSTMENT. Whenever the Exercise Price or number or type of securities issuable upon exercise of this Warrant is adjusted, as herein provided, the Company shall, at its expense, promptly deliver to the Holder a certificate of an officer of the Company setting forth the nature of such adjustment and showing in detail the facts upon which such adjustment is based.

7. NOTICES. In the event of:

(a) any taking by the Company of a record of the holders of any class of securities for the purpose of determining the holders thereof who are entitled to receive any dividend (other than a cash dividend payable out of earned surplus of the Company) or other distribution, or any right to subscribe for, purchase or otherwise acquire any shares of stock of any class or any other securities or property, or to receive any other right; or

(b) any voluntary or involuntary dissolution, liquidation or winding-up of the Company, then and in each such event the Company will promptly mail or cause to be delivered to the Holder (or a permitted transferee) a notice specifying (i) the date on which any such record is to be taken for the purpose of such dividend, distribution or right, and stating the amount and character of such dividend, distribution or right, and (ii) the date on which any such dissolution, liquidation or winding-up is to take place, and the time, if any, as of which the holders of record of Common Stock (or other securities) shall be entitled to exchange their shares of Common Stock (or other securities) for securities or other property deliverable upon such dissolution, liquidation or winding-up. Such notice shall be delivered at least twenty (20) days prior to the date therein specified.

(c) Whenever any other notice is required to be given under this Warrant, unless otherwise provided herein, the Company shall provide prompt written notice of all actions taken pursuant to this Warrant, including in reasonable detail a description of such action and the reason therefore.

8. REPLACEMENT OF WARRANTS. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of any such loss, theft or destruction of this Warrant, on delivery of an indemnity agreement reasonably satisfactory in form and amount to the Company or, in the case of any such mutilation, on surrender and cancellation of such Warrant, the Company at its expense will execute and deliver, in lieu thereof, a new Warrant of like tenor.

9. **ISSUANCE OF NEW WARRANTS.** Whenever the Company is required to issue a new Warrant pursuant to the terms of this Warrant, such new Warrant (i) shall be of like tenor with this Warrant, (ii) shall represent, as indicated on the face of such new Warrant, the right to purchase the Warrant Shares then underlying this Warrant (or in the case of a new Warrant being issued pursuant to Sections 8 or 9, the Warrant Shares designated by the Holder which, when added to the number of shares of Common Stock underlying the other new Warrants issued in connection with such issuance, does not exceed the number of Warrant Shares then underlying this Warrant), (iii) shall have an issuance date, as indicated on the face of such new Warrant which is the same as the Issuance Date, and (iv) shall have the same rights and conditions as this Warrant.

10. **NO FRACTIONAL SHARES.** No fractional Warrant Shares or scrip representing fractional shares will be issued upon exercise of this Warrant. In lieu of any fractional shares which would otherwise be issued, the Company shall pay cash equal to the product of such fraction multiplied by the Fair Market Value of one Warrant Share.

11. **AMENDMENT AND WAIVER.** Except as otherwise provided herein, the provisions of this Warrant may be amended and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Holder.

12. **TRADING DAYS.** If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall be other than a day on which the Common Stock is traded (which for the avoidance of doubt includes a Saturday, Sunday or a legal U.S. holiday) on the Nasdaq Global Select Market, or, if the Nasdaq Global Select Market is not the principal trading market for the Common Stock or other such securities, as applicable, then on the principal securities exchange or securities market on which the Common Stock is then traded then such action may be taken or such right may be exercised on the next succeeding day on which the Common Stock is so traded.

13. **TRANSFERS; EXCHANGES.**

(a) Subject to compliance with applicable federal and state securities laws and Section 7 hereof, this Warrant may be transferred by the Holder with respect to all of the Warrant Shares purchasable hereunder. For a transfer of this Warrant, as an entirety by Holder, upon surrender of this Warrant to the Company, together with the Notice of Assignment in the form attached hereto as Exhibit B properly completed and duly executed by the Holder, the Company shall issue a new Warrant of the same denomination to the assignee. Upon surrender of this Warrant to the Company, together with the Notice of Assignment in the form attached hereto as Exhibit B properly completed and duly executed by the Holder, for transfer of this Warrant with respect to a portion of the Warrant Shares purchasable hereunder, the Company will forthwith issue and deliver upon the order of the Holder a new Warrant (in accordance with Section 9), registered as the Holder may request, representing the right to purchase the number of Warrant Shares being transferred by the Holder and, if less than the total number of Warrant Shares then underlying this Warrant is being transferred, a new Warrant (in accordance with Section 9) to the Holder representing the right to purchase the number of Warrant Shares not being transferred.

(b) This Warrant is exchangeable, without expense, at the option of the Holder, upon presentation and surrender hereof to the Company for other warrants of different denominations entitling the holder thereof to purchase in the aggregate the same number of shares of Common Stock purchasable hereunder. This Warrant may be combined with other warrants that carry the same rights upon presentation hereof at the office of the Company designated for such purpose together with a written notice specifying the denominations in which new warrants are to be issued to the Holder and signed by the Holder hereof. The term "Warrants" as used herein includes any warrants into which this Warrant may be divided or exchanged.

(c) If, at the time of the surrender of this Warrant in connection with any transfer of this Warrant, the transfer of this Warrant shall not be either (i) registered pursuant to an effective registration statement under the Securities Act and under applicable state securities or blue sky laws or (ii) eligible for resale pursuant to Rule 144, the Company may require, as a condition of allowing such transfer; that the Holder or transferee of this Warrant, as the case may be, provide to the Company an opinion of counsel selected by the Holder and reasonably acceptable to the Company, the form and substance of which opinion shall be reasonably satisfactory to the Company, to the effect that such transfer does not require registration of such transferred Warrant under the Securities Act.

(d) The Holder, by the acceptance hereof, represents and warrants that, except when it exercises this Warrant pursuant to a Net Exercise, it is acquiring this Warrant and, upon any exercise hereof, will acquire the Warrant Shares issuable upon such exercise, for its own account and not with a view to or for distributing or reselling such Warrant Shares or any part thereof in violation of the Securities Act or any applicable state securities law, except pursuant to sales registered or exempted under the Securities Act.

14. GOVERNING LAW; VENUE. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. With respect to any disputes arising out of or related to this Warrant, the parties consent to the exclusive jurisdiction of, and venue in, the state courts in the State of New York (or in the event of exclusive federal jurisdiction, the courts of the District of New York). Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Warrant and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY WAIVES, 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 THIS WARRANT OR THE TRANSACTIONS CONTEMPLATED HEREBY.

15. DISPUTE RESOLUTION. In the case of a dispute as to the determination of the Exercise Price, the arithmetic calculation of the Warrant Shares or under Sections 2 or 6, the disputing party shall submit the disputed determinations or arithmetic calculations to the other party. If the Holder and the Company are unable to agree upon such determination or calculation of the Exercise Price or the Warrant Shares within three (3) trading days of such disputed determination or arithmetic calculation being submitted to the non-disputing party, then the Company shall, within two (2) trading days submit the dispute to an independent, reputable accountant. The Company shall cause, at the expense of the prevailing party, the accountant to perform the determinations or calculations and notify the Company and the Holder of the results no later than ten (10) trading days from the time it receives the disputed determinations or calculations. Such accountant's determination or calculation shall be binding upon all parties absent demonstrable error.

16. REMEDIES, OTHER OBLIGATIONS, BREACHES AND INJUNCTIVE RELIEF. The remedies provided in this Warrant shall be cumulative and in addition to all other remedies available under this Warrant, at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the right of the Holder to pursue actual damages for any failure by the Company to comply with the terms of this Warrant.

17. CONSTRUCTION; HEADINGS. This Warrant shall be deemed to be jointly drafted by the Company and the Holder and shall not be construed against any person as the drafter hereof. The headings of this Warrant are for convenience of reference and shall not form part of, or affect the interpretation of, this Warrant.

18. SUCCESSORS AND ASSIGNS. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of the Holder. The provisions of this Warrant are intended to be for and the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

19. RESTRICTIONS. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, must comply with the applicable restrictions upon resale imposed by state and federal securities laws.

20. MISCELLANEOUS. All notices, requests, consents and other communications hereunder shall be in writing, shall be sent by confirmed electronic mail, or mailed by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, and shall be deemed given when so sent in the case of electronic mail transmission, or when so received in the case of mail or courier, and addressed as follows: (a) if to the Company, at Gritstone bio, Inc. 5959 Horton Street, Suite 300, Emeryville, CA 94608, Attention: Chief Executive Officer; General Counsel; with a copy to (which shall not constitute notice) Latham & Watkins LLP, 140 Scott Drive, Menlo Park, CA 94025, Attention: Brian Cuneo and (b) if to the Holder, at such address or addresses (including copies to counsel) as may have been furnished by the Holder to the Company in writing. The invalidity or unenforceability of any provision hereof shall in no way affect the validity or enforceability of any other provisions.

[Signature Page Follows]

IN WITNESS WHEREOF, this Warrant is issued effective as of the date first set forth above.

GRITSTONE BIO, INC.

By: _____
Name:
Title:

EXHIBIT A

NOTICE OF INTENT TO EXERCISE
(To be signed only upon exercise of Warrant)

To: Gritstone bio, Inc.

The undersigned, the Holder of the attached Warrant, hereby irrevocably elects to exercise the purchase right represented by such Warrant for, and to purchase thereunder, [●] shares of Common Stock of Gritstone bio, Inc., a Delaware corporation (the "Company"), and (choose one)

[●] herewith makes payment of USD [●] thereof

or

[●] elects to Net Exercise the Warrant pursuant to Section 1(b)(2) thereof.

The undersigned requests that the certificates or book entry position evidencing the shares to be acquired pursuant to such exercise be issued in the name of, and delivered to [●], whose address is [●].

By its delivery of this Exercise Notice, the undersigned represents and warrants to the Company that in giving effect to the exercise evidenced hereby the Holder will not beneficially own in excess of the number of shares of Common Stock (as determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended) permitted to be owned under Section 5(c) of the Warrant to which this notice relates.

By its signature below the undersigned hereby represents and warrants that it is an "accredited investor" as defined in Rule 501(a) of Regulation D promulgated under the Securities Act of 1933, as amended, and agrees to be bound by the terms and conditions of the attached Warrant as of the date hereof, including Section 5 thereof.

DATED: _____

(Signature must conform in all respects to name of the Holder as specified on the face of the Warrant)

[Holder Name]

Address: _____

EXHIBIT B

NOTICE OF ASSIGNMENT FORM

FOR VALUE RECEIVED, [Holder Name] (the "Assignor") hereby sells, assigns and transfers all of the rights of the undersigned Assignor under the attached Warrant with respect to the number of shares of common stock of Gritstone bio, Inc., a Delaware corporation (the "Company"), covered thereby set forth below, to the following "Assignee" and, in connection with such transfer, represents and warrants to the Company that the transfer is in compliance with Section 5 of the Warrant and applicable federal and state securities laws:

NAME OF ASSIGNEE	ADDRESS
Number of shares: _____	
Dated: _____	Signature: _____
_____	_____

ASSIGNEE ACKNOWLEDGMENT

The undersigned Assignee acknowledges that it has reviewed the attached Warrant and by its signature below it hereby represents and warrants that it is an "accredited investor" as defined in Rule 501(a) of Regulation D promulgated under the Securities Act of 1933, as amended, and agrees to be bound by the terms and conditions of the Warrant as of the date hereof, including Section 5 thereof.

Signature: _____
By: _____
Its: _____

Address:



Gritstone Presents Positive Results from Two Phase 1 CORAL Studies, Providing Further Proof-of-Concept for Self-amplifying mRNA (samRNA) in Infectious Diseases

— *New data from CORAL-BOOST study demonstrate broad and durable immune response; high neutralizing antibody and T cell responses at 6 months post-boost vaccination* —

— *Interim results from CORAL-CEPI show good tolerability and immunogenicity in all vaccine-naïve subjects dosed* —

— *Data provide further support of Gritstone's self-amplifying mRNA (samRNA) as platform for infectious disease vaccines* —

EMERYVILLE, Calif., October 25, 2022 (GLOBE NEWSWIRE) — Gritstone bio, Inc. (Nasdaq: GRTS), a clinical-stage biotechnology company that aims to develop the world's most potent vaccines, today announced positive Phase 1 results from its ongoing CORAL-BOOST and CORAL-CEPI trials evaluating its self-amplifying mRNA (samRNA) vaccine candidates against SARS-CoV-2. The results, which will be presented by the studies' lead investigators in a [company-sponsored webinar](#) at 8:00 am ET today, collectively demonstrate Gritstone's samRNA vaccine candidates are well-tolerated and capable of driving strong, potentially durable and broad immunogenicity across several subject populations and settings. These results build upon previous preclinical and clinical findings and support the application of Gritstone's samRNA platform for the prevention and treatment of infectious diseases.

"Self-amplifying mRNA (samRNA) is rapidly emerging as a well-tolerated, scalable and widely-applicable platform technology where one can develop multiple vaccines simply by changing the sequence of the antigen that is encoded in the vector RNA," said Andrew Allen, M.D., Ph.D., Co-founder, President, and Chief Executive Officer of Gritstone. "These results show good immunogenicity and tolerability at low doses, with preliminary durability data supporting the potential for samRNA as a differentiated approach for SARS-CoV-2 and other viruses and pathogens, where much unmet need persists."

CORAL-CEPI Results (Presented by Professor Shabir Madhi of the U. of Witwatersrand, Johannesburg, South Africa):

The Phase 1 CORAL-CEPI trial (n=340) is evaluating T cell-enhanced omicron- and beta-spike constructs in vaccine-naïve, convalescent and HIV+ subjects. The study is being run in South Africa with support from the Coalition for Epidemic Preparedness Innovations (CEPI). Data are from Part A of the study (n=120) where subjects received beta-spike plus T Cell Epitope candidate vaccines at 3 dose levels.

In Part A (virus-naïve and convalescent subjects), Gritstone's samRNA vaccine demonstrated:

- A favorable safety and tolerability profile
 - All dose levels tested (3µg, 10µg and 30µg) were well tolerated
 - Mild and moderate solicited adverse events (AEs, grade 1-2) were largely resolved within 1-2 days after dosing
 - 3 subjects out of 120 developed transient grade 3 AEs
- Strong induction of neutralizing antibodies (nAb) and IgG across all variants studied to date (wild-type, beta and delta)
 - All dose levels were immunogenic in all cohorts
 - Two doses of samRNA vaccine candidate in SARS-CoV-2-naïve subjects (defined as baseline anti-N seronegative) induced strong nAb against both beta and delta variants, quantified using a live virus microneutralization assay performed by a reference laboratory (Vismederi, Italy)
 - One dose of samRNA vaccine candidate in SARS-CoV-2 convalescent subjects boosted nAb titers
- A dose-response effect was observed, most notably between 3µg and 10µg

CORAL-BOOST Results (Presented by Professor Andy Ustianowski of U. of Manchester, Manchester, UK):

Phase 1 study in the UK evaluating a single dose of samRNA vaccine candidate (10µg or 30µg) as a booster against SARS-CoV-2 in healthy volunteers ≥60 years old. Originally, the study focused on subjects who had previously received two prior doses of Vaxzevria (AstraZeneca's adenovirus vaccine) but was expanded in January 2022 to include two cohorts that previously received an mRNA primary series.

In 32 subjects, Gritstone's samRNA vaccine candidate demonstrated:

- A favorable safety and tolerability profile
 - Both 10 and 30µg doses of samRNA were well-tolerated, with transient mild to moderate adverse events (AEs)
 - 3 subjects out of 32 developed transient grade 3 AEs
- Broad, durable and strong neutralizing antibody responses
 - Broad and potent nAb responses, and broad anti-Spike IgG responses, were elicited against the vaccine variant (D614G) and key variants of concern (VoC) including beta, delta, omicron BA.1, and omicron BA.4/5
 - Persistence of nAb responses to 6 months was observed – nAb to vaccine variant and VoC persisted at least to day 180 with no decay in titer observed (N=7 subjects)
- A durable boost to pre-existing T cell responses to Spike antigens
 - Increased and durable Spike-specific T cell responses (measured by ex vivo ELISpot) 4 weeks and 6 months post-boost in individuals after ChAd-OX1 primary series
- Priming of T cell responses to the non-Spike viral epitopes, that are part of the vaccine cassette, with a single samRNA vaccination

“These data demonstrate exciting preliminary performance of our innovative samRNA vaccine candidates potentially delivering against the key unmet needs in the field – broad and durable cellular and humoral immunity. These qualities have direct applicability to a broad range of infectious diseases. In our CORAL-CEPI results specifically, we see preliminary and encouraging evidence that our samRNA vaccine candidate can trigger a broad immune response for other variants than those included in the construct.” said Karin Jooss, EVP and Head of R&D at Gritstone bio. “As an early adopter of samRNA with substantial experience applying it in our cancer programs (part of our prime-boost approach), we believe Gritstone bio is uniquely positioned to unlock the value of this powerful vaccine platform against a variety of infectious diseases. We look forward to continuing these studies and to interrogating the many ways that we can apply self-amplifying mRNA to enable differentiated, broad, and lasting immune response.”

Webinar Details

Date and time: 8:00 – 9:00 am ET Tuesday, October 25

Link: To register for the webinar, please click [here](#)

Replay of the webinar will be accessible for 30 days following the event on the events page of the company's website:

<https://ir.gritstonebio.com/investors/events>.

About the CORAL Program

Gritstone's CORAL program is evaluating the company's infectious disease approach, which is designed to drive both B cell and T cell immunity using self-amplifying mRNA (samRNA) against SARS-CoV-2. The program currently includes three ongoing Phase 1 trials: CORAL-BOOST, which is evaluating one construct in a boost setting (following primary series of currently-approved COVID-19 vaccines); CORAL-CEPI, which is evaluating multiple constructs in virus-naïve, convalescent, and HIV+ subjects in South Africa; and CORAL-NIH, which is being run by the National Institute of Allergy and Infectious Disease (NIAID) and is evaluating multiple constructs in previously vaccinated healthy volunteers. The program serves as proof-of-concept for the application of Gritstone's platform against coronaviruses and other infectious diseases and is supported by the Bill & Melinda Gates Foundation, NIAID and the Coalition for Epidemic Preparedness Innovations (CEPI).

About Gritstone bio

Gritstone bio, Inc. (Nasdaq: GRTS) is a clinical-stage biotechnology company that aims to create the world's most potent vaccines. We leverage our innovative vectors and payloads to train multiple arms of the immune system to attack critical disease targets. Independently and with our collaborators, we are advancing a portfolio of product candidates to treat and prevent viral diseases and solid tumors in pursuit of improving patient outcomes and eliminating disease. www.gritstonebio.com

Gritstone Forward-Looking Statements

This press release contains forward-looking statements, including, but not limited to, statements related to the potential of Gritstone's therapeutic programs; the advancements in Gritstone's ongoing clinical trials; the timing of data announcements related to ongoing clinical trials and the initiation of future clinical trials. Such forward-looking statements involve substantial risks and uncertainties that could cause Gritstone's research and clinical development programs, future results, performance or achievements to differ significantly from those expressed or implied by the forward-looking statements. Such risks and uncertainties include, among others, the uncertainties inherent in the drug development process, including Gritstone's programs' clinical stage of development, the process of designing and conducting preclinical and clinical trials, the regulatory approval processes, the timing of regulatory filings, the challenges associated with manufacturing drug products, Gritstone's ability to successfully establish, protect and defend its intellectual property and other matters that could affect the sufficiency of existing cash to fund operations. Gritstone undertakes no obligation to update or revise any forward-looking statements. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the business of the company in general, see Gritstone's most recent Annual Report on Form 10-K filed on March 10, 2022, as well as Gritstone's Quarterly Reports on Form 10-Q filed on May 5, 2022 and August 4, 2022 and any current and periodic reports filed with the Securities and Exchange Commission. The forward-looking statements in this press release are based on information available to Gritstone as of the date hereof. Gritstone disclaims any obligation to update any forward-looking statements, except as required by law.