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): April 7, 2022

LYRA THERAPEUTICS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**001-39273**	**84-1700838**
(State or other jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

480 Arsenal Way **Watertown, MA** **(Address of principal executive offices)**	**02472** **(Zip Code)**

(617) 393-4600
(Registrant's telephone number, including area code)

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 (see General Instruction A.2. below):

☐ 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)-2 of the Exchange Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, $0.001 par value per share	**LYRA**	**The Nasdaq Global 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 April 7, 2022, Lyra Therapeutics, Inc. (the "Company") entered into a Securities Purchase Agreement (the "Purchase Agreement") with the purchasers named therein (the "Investors"), pursuant to which the Company agreed to sell securities to the Investors in a private placement (the "Private Placement").

In the Private Placement, the Investors had the option to purchase either (a) shares of the Company's common stock, par value $0.001 per share (the "Common Stock"), at a price of $4.22 per share, or (b) in lieu thereof, pre-funded warrants to purchase shares of Common Stock, with an exercise price of $0.001 per share, at a purchase price of $4.219 per share (for aggregate consideration equating to $4.22 per share). Accordingly, pursuant to the Purchase Agreement, the Company agreed to sell (i) an aggregate of 18,815,159 shares (the "Shares") of Common Stock to the Investors at the purchase price described in the preceding sentence and (ii) warrants (the "Warrants") to purchase an aggregate of 5,000,000 shares of Common Stock (the "Warrant Shares") to certain of the Investors with the exercise price and at the purchase price described in the preceding sentence, for aggregate gross proceeds of approximately $100.5 million, before deducting private placement expenses. The closing of the Private Placement occurred on April 12, 2022 (the "Closing Date").

On April 7, 2022, in connection with the Purchase Agreement, the Company entered into a Ninth Amended and Restated Investor Rights Agreement (the "Ninth A&R Investor Rights Agreement") with certain Investor funds affiliated with Perceptive Advisors and North Bridge Venture Partners (the "IRA Covered Investors"). Each of the IRA Covered Investors was a party to the Company's existing Eighth Amended and Restated Investor Rights Agreement, dated as of January 10, 2020, as amended, pursuant to which certain outstanding shares of Common Stock held by such IRA Covered Investors constituted "Registrable Shares" (as defined therein) and thereby were entitled to certain registration rights as more specifically set forth therein. Under the Ninth A&R Investor Rights Agreement, the Company agreed to (i) expand the definition of "Registrable Shares" to include all shares of Common Stock acquired by the IRA Covered Investors in the Private Placement, all shares of Common Stock acquired by the IRA Covered Investors prior to April 7, 2022 and any shares of Common Stock issued in respect of such shares because of stock dividends, splits or combinations of securities, reclassifications, recapitalizations or similar events and (ii) make certain other modifications to the terms of the registration rights therein for the benefit of the IRA Covered Investors.

In addition, pursuant to the Ninth A&R Investor Rights Agreement, the Company also agreed that:

- for so long as the IRA Covered Investor fund affiliated with Perceptive Advisors (and/or its affiliates) beneficially owns:
    - 20% or greater of the Company's total voting securities outstanding, the Company shall take all reasonable actions within its control to include in the slate of nominees recommended by the Board of Directors and/or the applicable committee thereof for election as directors at each applicable annual or special meeting of stockholders at which directors are to be elected (the "Slate"), a number of individuals designated by such Perceptive Advisors fund (each, a "Perceptive Designee") that, if elected, would result in at least two Perceptive Designees serving on the Board of Directors; and
    - 10% or greater but less than 20% of the Company's total voting securities outstanding, the Company shall take all reasonable actions within its control to include in the Slate a number of Perceptive Designees that, if elected, would result in at least one Perceptive Designee serving on the Board of Directors; and
- for so long as the IRA Covered Investor funds affiliated with North Bridge Venture Partners (and/or its affiliates) beneficially owns 10% or greater of the Company's total voting securities outstanding, the Company shall take all reasonable actions within its control to include in the Slate a number of individuals designated by such North Bridge Venture Partners funds (each, a "North Bridge Designee") that, if elected, would result in at least one North Bridge Designee serving on the Board of Directors.

In addition, on April 7, 2022, in connection with the Purchase Agreement, the Company entered into a Registration Rights Agreement (the "Registration Rights Agreement") with all of the Investors other than the IRA Covered

Investors (the "RRA Covered Investors"). Pursuant to the Registration Rights Agreement, the Company agreed to prepare and file a registration statement with the Securities and Exchange Commission (the "SEC") within 30 days after the Closing Date, for purposes of registering the resale of the Shares and the Warrant Shares underlying the Warrants purchased by the RRA Covered Investors in the Private Placement, and any shares of Common Stock issued as a dividend or other distribution with respect to, in exchange for or in replacement of such Shares or Warrant Shares. The Company agreed to use commercially reasonable efforts to cause such registration statement to be declared effective by the SEC within 60 days after the Closing Date, or 90 days after the Closing Date if the SEC reviews the registration statement.

The Company has also agreed to, among other things, indemnify each Investor, its officers, directors, members, managers, partners, trustees, employees and agents and other representatives, successors and assigns, and each other person, if any, who controls such Investor within the meaning of the Securities Act of 1933, as amended (the "Securities Act"), under the registration statement against certain liabilities incident to the Company's obligations under the Registration Rights Agreement.

The Private Placement is exempt from registration pursuant to Section 4(a)(2) of the Securities Act and Regulation D promulgated thereunder, as a transaction by an issuer not involving a public offering. The Investors have not acquired the securities with a view to or for sale in connection with any distribution thereof in violation of the Securities Act and appropriate legends have been affixed to the securities issued in this transaction.

The foregoing summaries do not purport to be complete and are qualified in their entirety by reference to the Purchase Agreement, the Registration Rights Agreement, the Ninth A&R Investor Rights Agreement and the Warrants, which are filed as Exhibits 10.1, 10.2, 4.1 and 4.2, respectively, to this Current Report on Form 8-K.

On April 8, 2022, the Company issued a press release, a copy of which is attached as Exhibit 99.1 to this Current Report on Form 8-K, announcing the pricing of the Offering.

Item 3.02. Unregistered Sales of Equity Securities.

The information contained in Item 1.01 of this Current Report on Form 8-K is incorporated by reference into this Item 3.02.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
4.1	Ninth Amended and Restated Investor Rights Agreement, dated as of April 7, 2022, by and among Lyra Therapeutics, Inc. and the Investors named therein.
4.2	Form of Common Stock Purchase Warrant, together with a schedule of Warrants, each dated April 12, 2022, issued by Lyra Therapeutics, Inc. to the Investors set forth on such schedule.
10.1#	Securities Purchase Agreement, dated as of April 7, 2022, by and among Lyra Therapeutics, Inc. and the Investors named therein.
10.2	Registration Rights Agreement, dated as of April 7, 2022, by and among Lyra Therapeutics, Inc. and the Investors named therein.
99.1	Press Release, dated as of April 8, 2022.
104	Cover Page Interactive Data File (embedded within the inline XBRL document)

The representations and warranties contained in this agreement were made only for purposes of the transactions contemplated by the agreement as of specific dates and may have been qualified by certain disclosures between the parties and a contractual standard of materiality different from those generally applicable under securities laws, among other limitations. The representations and warranties were made for purposes of allocating contractual risk between the parties to the agreement and should not be relied upon as a disclosure of factual information relating to the Company, the Investors or the transactions described in this Current Report on Form 8-K.

SIGNATURES

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

LYRA THERAPEUTICS, INC.

Date: April 13, 2022

By: /s/ Maria Palasis
Maria Palasis, Ph.D.
President and Chief Executive Officer

Exhibit 4.1

LYRA THERAPEUTICS, INC.

NINTH AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

This Agreement dated as of April 7, 2022 is entered into by and among Lyra Therapeutics, Inc., a Delaware corporation (the "Company") and the individuals and entities listed as investors on Schedule A attached hereto (individually, an "Investor" and collectively, the "Investors").

Recitals

WHEREAS, the Company was a party with the stockholders of the Company named therein to an Eighth Amended and Restated Investor Rights Agreement dated as of January 10, 2020, by and among the Company, the Investors and the other parties thereto (as amended, the "Prior IRA").

WHEREAS, certain parties, concurrently herewith are purchasing shares of the Company's Common Stock pursuant to that certain Securities Purchase Agreement of even date herewith (the "Purchase Agreement").

WHEREAS, the Investors' obligations in the Purchase Agreement are conditioned upon the Company's execution and delivery of this Agreement.

WHEREAS, the signatories to this Agreement hold the requisite number of shares to effect the amendment of the Prior IRA and desire to amend and restate the Prior IRA in its entirety.

WHEREAS, the Company and the Investors desire to provide for certain arrangements with respect to the registration of shares of capital stock of the Company under the Securities Act of 1933, as amended.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Certain Definitions.

As used in this Agreement, the following terms shall have the following respective meanings:

"Board of Directors" means the Company's board of directors.

"Commission" means the Securities and Exchange Commission, or any other federal agency at the time administering the Securities Act.

"Common Stock" means the common stock, $0.001 par value per share, of the Company.

"Company" shall have the meaning set forth in the Preamble.

"Company Sale" means: (a) a merger or consolidation in which (i) the Company is a constituent party, or (ii) a subsidiary of the Company is a constituent party and the Company issues shares of its capital stock pursuant to such merger or consolidation, except in the case of either clause (i) or (ii), any such merger or consolidation involving the Company or any of its subsidiaries in which the shares of capital stock of the Company outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for equity interests which represent, immediately following such merger or consolidation, more than fifty percent (50%) by voting power of the equity interests of (A) the surviving or resulting entity or (B) if the surviving or resulting entity is a wholly owned subsidiary of another entity immediately following such merger or consolidation, the entity that is the parent entity of such surviving or resulting entity, in each case in substantially the same proportions as such stockholders held the outstanding stock of the Company immediately prior thereto; (b) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Company or any of its subsidiaries, of all or substantially all the assets of the company and its subsidiaries taken as a whole (except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Company); or (c) the sale or transfer, in a single transaction or series of related transactions, by the stockholders of the Company of more than fifty percent (50%) by voting power of the then-outstanding capital stock of the Company to any person or entity or group of affiliated entities.

"Exchange Act" means the Securities Exchange Act of 1934, as amended, or any successor federal statute, and the rules and regulations of the Commission issued under such Act, as they each may, from time to time, be in effect.

"Indemnifying Party" shall have the meaning set forth in Section 2.5(c).

"Initiating Holders" means the Stockholders initiating a request for registration pursuant to Section 2.1(a) or 2.1(b), as the case may be.

"Initial Public Offering" means the Company's initial underwritten public offering of shares of Common Stock pursuant to an effective Registration Statement, which closed on May 5, 2020.

"Investors" shall have the meaning set forth in the Preamble.

"Maximum Number of Securities" shall have the meaning set forth in Section 2.1(d).

"North Bridge" means, collectively, North Bridge Venture Partners V-A, L.P., North Bridge Venture Partners V-B, L.P. and North Bridge Venture Partners IV, L.P.

"Notice of Acceptance" shall have the meaning set forth in Section 3.1(b).

"Other Holders" shall have the meaning set forth in Section 2.1(d).

"Perceptive" means, collectively, Perceptive Life Sciences Master Fund Ltd and Perceptive LS (A), LLC.

"Prospectus" means the prospectus included in any Registration Statement, as amended or supplemented by an amendment or prospectus supplement, including post-effective amendments, and all material incorporated by reference or deemed to be incorporated by reference in such Prospectus.

"Purchase Agreement" shall have the meaning set forth in the Recitals.

"Registration Statement" means a registration statement filed by the Company with the Commission for a public offering and sale of securities of the Company (other than a registration statement on Form S-8 or Form S-4, or their successors, or any other form for a similar limited purpose, or any registration statement covering only securities proposed to be issued in exchange for securities or assets of another corporation).

"Registration Expenses" means the expenses described in Section 2.4.

"Registrable Shares" means (i) any shares of Common Stock held by an Investor or other Stockholder, and any shares of Common Stock issued or issuable upon the conversion or exercise of any other securities, in each case that were acquired by such Investor or other Stockholder prior to the date hereof, (ii) the shares of Common Stock purchased by an Investor pursuant to the Purchase Agreement and (iii) any other shares of Common Stock issued in respect of the shares described in clauses (i) and (ii) (because of stock dividends, splits or combinations of securities, reclassifications, recapitalizations, or similar events occurring after the date of this Agreement); provided, however, that shares of Common Stock which are Registrable Shares shall cease to be Registrable Shares upon (i) any sale pursuant to a Registration Statement or Rule 144 under the Securities Act, (ii) any sale in any manner to a person or entity which, by virtue of Section 4 of this Agreement, is not entitled to the rights provided by this Agreement or (iii) the termination with respect to such shares of registration rights pursuant to Section 2.11 of this Agreement.

"Securities Act" means the Securities Act of 1933, as amended, or any successor federal statute, and the rules and regulations of the Commission issued under such Act, as they each may, from time to time, be in effect.

"Selling Stockholder" means any Stockholder owning Registrable Shares included in a Registration Statement.

"Stockholder" means any Investor and any person or entity to whom the rights granted under this Agreement are transferred by any Investor, its successors or assigns pursuant to Section 4 hereof.

"Voting Securities" means any shares of Common Stock and any other securities of the Company entitled to vote generally in the election of directors of the Company.

2. Registration Rights

2.1. Required Registrations.

(a) At any time and from time to time, a Stockholder or Stockholders holding in the aggregate at least thirty percent (30%) of the Registrable Shares then outstanding may request, in writing, that the Company effect the registration on Form S-1 (or any successor form) of Registrable Shares owned by such Stockholder or Stockholders having an aggregate value of at least Five Million Dollars ($5,000,000) (based on the market price or fair value on the date of such request).

(b) At any time after the Company becomes eligible to file a Registration Statement on Form S-3 (or any successor form relating to secondary offerings), a Stockholder or Stockholders may request, in writing, that the Company effect the registration on Form S-3 (or such successor form) (if Form S-3 (or such successor form) is available for such offering), of Registrable Shares having an aggregate value of at least Two Million Dollars ($2,000,000) (based on the public market price on the date of such request).

(c) Upon receipt of any request for registration pursuant to this Section 2.1, the Company shall within two (2) business days give written notice of such proposed registration to all other Stockholders. Such Stockholders shall have the right, by giving written notice to the Company within five (5) days after the Company provides its notice, to elect to have included in such registration such of their Registrable Shares as such Stockholders may request in such notice of election, subject in the case of an underwritten offering to the approval of the managing underwriter as provided in Section 2.1(d) below. Thereupon, the Company shall use its reasonable best efforts to effect, as expeditiously as possible, but no later than thirty (30) days following the date of the registration request under Section 2.1(a) or (b) as applicable, the registration on an appropriate registration form of all Registrable Shares which the Company has been requested to so register (provided, however, that in the case of a registration requested under Section 2.1(b), the Company will only be obligated to effect such registration on Form S-3 (or any successor form)); provided further that if a request for registration shall be in the form of an underwritten offering, and the Company already has an effective Registration Statement that covers the resale, from time to time, of Registrable Shares held by the Initiating Holder, the Company shall use reasonable best efforts to effectuate such underwritten offering as soon as practicable but, in any event, no later than ten (10) business days of such request.

(d) If the Initiating Holders intend to distribute the Registrable Shares covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to Section 2.1(a) or (b), as the case may be, and the Company shall include such information in its written notice referred to in Section 2.1(c). The right of any other Stockholder to include its Registrable Shares in such registration pursuant to Section 2.1(a) or (b), as the case may be, shall be conditioned upon such other Stockholder's participation in such underwriting on the terms set forth herein. If the Company desires that any securities of the Company held by officers and directors of the Company be included in any registration for an underwritten offering requested pursuant to Sections 2.1(a) or (b) or if other holders of securities of the Company who are entitled, by contract with the Company, to have securities included in such a registration (the "Other Holders") request such inclusion, the Company may include the securities of such officers, directors and Other Holders in such registration and underwriting on the terms set forth herein. The Company shall (together with all Stockholders, officers, directors and Other Holders proposing to distribute their securities through such underwriting) enter into an underwriting agreement in customary form (including, without limitation, customary indemnification and contribution provisions on the part of the Company) with the managing underwriter. Notwithstanding any other provision of this Section 2.1(d), if the managing

underwriter advises the Company that the inclusion of all shares requested to be registered would adversely affect the offering, the securities of the Company held by officers or directors of the Company (other than Registrable Shares) and the securities held by Other Holders (other than Registrable Shares) shall be excluded from such registration and underwriting to the extent deemed advisable by the managing underwriter, and if a further limitation of the number of shares is required, the number of shares that may be included in such registration (the "Maximum Number of Securities") and underwriting shall be allocated (i) first to Perceptive and North Bridge, and (ii) second, to the extent that the Maximum Number of Securities is not exceeded, among all holders of Registrable Shares requesting registration, in each case, in proportion, as nearly as practicable, to the respective number of Registrable Shares held by them at the time of the request for registration made by the Initiating Holders pursuant to Section 2.1(a) or (b), as the case may be. If any holder of Registrable Shares, officer, director or Other Holder who has requested inclusion in such registration as provided above disapproves of the terms of the underwriting, such person may elect to withdraw therefrom by written notice to the Company, and the securities so withdrawn shall also be withdrawn from registration. If the managing underwriter has not limited the number of Registrable Shares or other securities to be underwritten, the Company may include securities for its own account in such registration if the managing underwriter so agrees and if the number of Registrable Shares and other securities which would otherwise have been included in such registration and underwriting will not thereby be limited.

(e) The Initiating Holders shall have the right to select the managing underwriter(s) for any underwritten offering requested pursuant to Section 2.1(a) or (b), subject to the approval of the Company, which approval will not be unreasonably withheld or delayed.

(f) The Company shall not be required to effect (i) more than three (3) registrations (for the avoidance of doubt, not including any Permitted Withdrawn Registrations) pursuant to Section 2.1(a) or underwritten offerings pursuant to an effective shelf Registration Statement, in each case initiated by Perceptive, (ii) more than three (3) registrations (for the avoidance of doubt, not including any Permitted Withdrawn Registrations) pursuant to Section 2.1(a) covering Registrable Shares held by any Investors or Stockholders other than Perceptive or (iii) more than two (2) registrations (for the avoidance of doubt, not including any Permitted Withdrawn Registrations) in any 12-month period pursuant to Section 2.1(b). In addition, the Company shall not be required to effect any registration (other than on Form S-3 or any successor form relating to secondary offerings) within six months after the effective date of any other Registration Statement of the Company. For purposes of this Section 2.1(f), a Registration Statement shall not be counted (i) unless at least fifty percent (50%) of the Registrable Shares requested by the Initiating Holders to be registered on such Registration Statement have been included therein and (ii) until such time as such Registration Statement has been declared effective by the Commission (unless the Initiating Holders withdraw their request for such registration, other than a Permitted Withdrawn Registration). For purposes hereof, a "Permitted Withdrawn Registration" shall mean any registration for which the Initiating Holders (x) withdraw their request for such registration as a result of material information concerning the business or financial condition of the Company which is made known to the Stockholders after the date on which such registration was requested or (y) otherwise withdraw their request for such registration but elect to pay the Registration Expenses therefor pursuant to Section 2.4). For the avoidance of doubt, at any time prior to the effective date of the Registration Statement relating to a registration requested pursuant to Section 2.1(a) or the "pricing" of any underwritten offering, an Initiating Holder may revoke or withdraw such registration with respect to itself without liability to any other Stockholders participating in such registration, in each case by providing written notice to the Company.

(g) If at the time of any request to register Registrable Shares by Initiating Holders pursuant to this Section 2.1, the Company is engaged or has plans to engage in a registered public offering or is engaged in any other activity which, in the good faith determination of the Company's Board of Directors, would be adversely affected by the requested registration, then the Company may at its option direct that such request be delayed for a period not in excess of ninety (90) days from the date of such request, such right to delay a request to be exercised by the Company not more than once in any 12-month period.

2.2. Incidental Registration.

(a) Whenever the Company proposes to file a Registration Statement (other than a Registration Statement filed pursuant to Section 2.1, at any time and from time to time, it will, prior to such filing, give written notice to all Stockholders of its intention to do so. Upon the written request of a Stockholder or Stockholders, given within twenty (20) days after the Company provides such notice (which request shall state the intended method of disposition of the Registrable Shares requested to be registered), the Company shall use its reasonable best efforts to cause all Registrable Shares which the Company has been requested by such Stockholder or Stockholders to register to be registered under the Securities Act to the extent necessary to permit their sale or other disposition in accordance with the intended methods of distribution specified in such request; provided that the Company shall have the right to postpone or withdraw any registration effected pursuant to this Section 2.2 without obligation to any Stockholder.

(b) If the registration for which the Company gives notice pursuant to Section 2.2(a) is a registered public offering involving an underwriting, the Company shall so advise the Stockholders and Founders as a part of the written notice given pursuant to Section 2.2(a). In such event, the right of any Stockholder to include its Registrable Shares in such registration pursuant to Section 2.2 shall be conditioned upon such Stockholder's participation in such underwriting on the terms set forth herein. All Stockholders proposing to distribute their securities through such underwriting shall (together with the Company, Other Holders, and any officers or directors distributing their securities through such underwriting) enter into an underwriting agreement in customary form with the underwriter or underwriters selected for the underwriting by the Company. Notwithstanding any other provision of this Section 2.2, if the managing underwriter determines that the inclusion of all shares requested to be registered would adversely affect the offering, the Company may limit (to zero) the number of Registrable Shares to be included in the registration and underwriting. The Company shall so advise all holders of Registrable Shares requesting registration, and the number of shares that are entitled to be included in the registration and underwriting shall be allocated in the following manner: the securities of the Company held by officers and directors of the Company (other than Registrable Shares) shall be excluded from such registration and underwriting to the extent deemed advisable by the managing underwriter, and, if a further limitation on the number of shares is required the other securities held by officers and directors of the Company (including Registrable Shares), shall be excluded from such registration and underwriting to the extent deemed advisable by the managing

underwriter, and if a further limitation on the number of shares is required, the number of shares that may be included in such registration and underwriting (other than shares to be sold by the Company) shall be allocated (i) first to Perceptive and North Bridge and (ii) second to the extent that the Maximum Number of Securities is not exceeded among all Stockholders and Other Holders requesting registration, in each case, in proportion, as nearly as practicable, to the respective number of shares of Common Stock (on an as-converted basis) which they held at the time the Company gave the notice specified in Section 2.2(a) (excluding from calculation any securities excluded from such registrations as set forth above in this sentence, provided that, if any shares are to be sold in such offering other than on behalf of the Company, then the total number of Registrable Shares permitted to be included therein shall in any event be at least fifty percent (50%) of the securities included therein (based on aggregate market values). If any Stockholder or Other Holder would thus be entitled to include more securities than such holder requested to be registered, the excess shall be allocated among other requesting Stockholders and Other Holders pro rata in the manner described in the preceding sentence. If any holder of Registrable Shares or any officer, director or Other Holder disapproves of the terms of any such underwriting, such person may elect to withdraw therefrom by written notice to the Company, and any Registrable Shares or other securities excluded or withdrawn from such underwriting shall be withdrawn from such registration. For the avoidance of doubt, no shares to be offered on behalf of the Company shall be required to be excluded from such Registration Statement and underwriting unless all shares held by holders of securities of the Company (including Stockholders and Other Holders) have been excluded from such Registration Statement and underwriting.

(c) The Company shall have the right to select the managing underwriter for any underwritten offering requested pursuant to Section 2.2, subject to the approval of the holders of a majority of the Registrable Shares, which approval will not be unreasonably withheld or delayed.

2.3. Registration Procedures.

(a) If and whenever the Company is required by the provisions of this Agreement to use its reasonable best efforts to effect the registration of any Registrable Shares under the Securities Act, the Company shall:

(i) file with the Commission a Registration Statement with respect to such Registrable Shares and use its reasonable best efforts to cause that Registration Statement to become and remain effective for one hundred eighty (180) days from the effective date or such lesser period until all such Registrable Shares are sold;

(ii) as expeditiously as possible prepare and file with the Commission any amendments and supplements to the Registration Statement and the Prospectus as may be necessary to comply with the provisions of the Securities Act (including the anti-fraud provisions thereof) and to keep the Registration Statement effective for one hundred eighty (180) days from the effective date or such lesser period until all such Registrable Shares are sold;

(iii) as expeditiously as possible furnish to each Selling Stockholder such reasonable number of copies of the Prospectus, including any preliminary prospectus, in conformity with the requirements of the Securities Act, and such other documents as such Selling Stockholder may reasonably request in order to facilitate the public sale or other disposition of the Registrable Shares owned by such Selling Stockholder;

(iv) use its reasonable best efforts to, as expeditiously as possible, register or qualify the Registrable Shares covered by the Registration Statement under the securities or Blue Sky laws of such states as the Selling Stockholders shall reasonably request, and do any and all other acts and things that may be necessary or desirable to enable the Selling Stockholders to consummate the public sale or other disposition in such states of the Registrable Shares owned by the Selling Stockholder; provided, however, that the Company shall not be required in connection with this paragraph (iv) to qualify as a foreign corporation or execute a general consent to service of process in any jurisdiction;

(v) as expeditiously as possible, cause all such Registrable Shares to be listed on each securities exchange or automated quotation system on which similar securities issued by the Company are then listed;

(vi) promptly provide a transfer agent and registrar for all such Registrable Shares not later than the effective date of such registration statement;

(vii) promptly make available for inspection by the Selling Stockholders, any managing underwriter participating in any disposition pursuant to such Registration Statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the Selling Stockholders, all financial and other records, pertinent corporate documents and properties of the Company and cause the Company's officers, directors, employees and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant or agent in connection with such Registration Statement;

(viii) as expeditiously as possible, notify each Selling Stockholder of the time when such Registration Statement has become effective or a supplement to any Prospectus forming a part of such Registration Statement has been filed; and

(ix) as expeditiously as possible following the effectiveness of such Registration Statement, notify each Selling Stockholder of such Registrable Shares of any request by the Commission for the amending or supplementing of such Registration Statement or Prospectus.

(b) If the Company has delivered a Prospectus to the Selling Stockholders, and after having done so the Prospectus is amended to comply with the requirements of the Securities Act, the Company shall promptly notify the Selling Stockholders of such amendment and, if necessary, request that the Selling Stockholders immediately cease making offers of Registrable Shares and return all Prospectuses to the Company. The Company shall promptly provide the Selling Stockholders with revised Prospectuses and, following receipt of the revised Prospectuses, the Selling Stockholders shall be free to resume making offers of the Registrable Shares.

(c) In the event that, in the judgment of the Company, it is advisable to suspend use of a Prospectus included in a Registration Statement due to pending material developments or other events that have not yet been publicly disclosed and as to which the Company believes public disclosure would be detrimental to the Company, the Company shall notify all Selling Stockholders to such effect, and, upon receipt of such notice, each such Selling Stockholder shall immediately discontinue any sales of Registrable Shares pursuant to such Registration Statement until such Selling Stockholder has received copies of a supplemented or amended Prospectus or until such Selling Stockholder is advised in writing by the Company that the then current Prospectus may be used and has received copies of any additional or supplemental filings that are incorporated or deemed incorporated by reference in such Prospectus. Notwithstanding anything to the contrary herein, the Company shall not exercise its rights under this Section 2.3(c) to suspend sales of Registrable Shares for a period in excess of ninety (90) days in any three hundred sixty-five-day (365-day) period.

(d) In connection with any underwritten offering of Registrable Shares requested pursuant to Sections 2.1 or 2.2, the Company shall cause to make available senior executives of the Company to participate in customary "road show" presentations that may be reasonably requested by the managing underwriter(s) in any such offering.

2.4. Allocation of Expenses. The Company will pay all Registration Expenses for all registrations under this Agreement; provided, however, that if a registration under Section 2.1 is withdrawn at the request of the Initiating Holders (other than as a result of material information concerning the business or financial condition of the Company which is made known to the Stockholders after the date on which such registration was requested) and if the Initiating Holders elect not to have such registration counted as a registration requested under Section 2.1, the requesting Stockholders shall pay the Registration Expenses of such registration pro rata in accordance with the number of their Registrable Shares included in such registration. For purposes of this Section, the term "Registration Expenses" shall mean all expenses incurred by the Company in complying with this Agreement, including, without limitation, all registration and filing fees, exchange listing fees, printing expenses, fees and expenses of counsel for the Company and the reasonable fees and expenses (not to exceed $75,000) of one counsel selected by a majority in interest of the Selling Stockholders to represent the Selling Stockholders, state Blue Sky fees and expenses, and the expense of any special audits incident to or required by any such registration, but excluding underwriting discounts, selling commissions and the fees and expenses of Selling Stockholders' own counsel (other than the counsel selected to represent all Selling Stockholders).

2.5. Indemnification and Contribution.

(a) In the event of any registration of any of the Registrable Shares under the Securities Act pursuant to this Agreement, the Company will indemnify and hold harmless the seller of such Registrable Shares, each of its directors, partners, and officers, each underwriter of such Registrable Shares, and each other person, if any, who controls such seller or underwriter within the meaning of the Securities Act or the Exchange Act against any losses, claims, damages or liabilities, joint or several, to which such seller, underwriter or controlling person may become subject under the Securities Act, the Exchange Act, state securities or Blue Sky laws or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of any material fact contained in any Registration Statement under which such Registrable Shares were registered under the Securities Act, any preliminary prospectus or final prospectus contained in

the Registration Statement, or any amendment or supplement to such Registration Statement, or arise out of or are based upon the omission or alleged omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading; and the Company will reimburse such seller, underwriter and each such controlling person for any legal or any other expenses reasonably incurred by such seller, underwriter or controlling person in connection with investigating or defending any such loss, claim, damage, liability or action; provided, however, that the Company will not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon any untrue statement or omission of a material fact made in such Registration Statement, preliminary prospectus or final prospectus, or any such amendment or supplement, in reliance upon and in conformity with information furnished to the Company, in writing, by or on behalf of such seller, underwriter or controlling person specifically for use in the preparation thereof or to the extent that such loss, claim, damage or liability arises out of such seller's failure to deliver a copy of the preliminary or final prospectus or any amendment or supplement thereto.

(b) In the event of any registration of any of the Registrable Shares under the Securities Act pursuant to this Agreement, each seller of Registrable Shares, severally and not jointly, will indemnify and hold harmless the Company, each of its directors and officers and each underwriter (if any) and each person, if any, who controls the Company or any such underwriter within the meaning of the Securities Act or the Exchange Act, against any losses, claims, damages or liabilities, joint or several, to which the Company, such directors and officers, underwriter or controlling person may become subject under the Securities Act, Exchange Act, state securities or Blue Sky laws or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of a material fact contained in any Registration Statement under which such Registrable Shares were registered under the Securities Act, any preliminary prospectus or final prospectus contained in the Registration Statement, or any amendment or supplement to the Registration Statement, or arise out of or are based upon any omission or alleged omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading, if the statement or omission was made in reliance upon and in conformity with information relating to such seller furnished in writing to the Company by or on behalf of such seller specifically for use in connection with the preparation of such Registration Statement, preliminary prospectus or final prospectus, amendment or supplement; provided, however, that the obligations of a seller of Registrable Shares hereunder shall be limited to an amount equal to the net proceeds to such seller of Registrable Shares sold in connection with such registration.

(c) Each party entitled to indemnification under this Section (the "Indemnified Party") shall give notice to the party required to provide indemnification (the "Indemnifying Party") promptly after such Indemnified Party has actual knowledge of any claim as to which indemnity may be sought, and shall permit the Indemnifying Party to assume the defense of any such claim or any litigation resulting therefrom; provided that counsel for the Indemnifying Party, who shall conduct the defense of such claim or litigation, shall be approved by the Indemnified Party (whose approval shall not be unreasonably withheld); and provided further that the failure of any Indemnified Party to give notice as provided herein shall not relieve the Indemnifying Party of its obligations under this Section except to the extent that the Indemnifying Party is adversely affected by such failure. The Indemnified Party may participate in such defense at such party's expense; provided, however, that the Indemnifying Party shall pay

such expense if representation of such Indemnified Party by the counsel retained by the Indemnifying Party would be inappropriate due to actual or potential differing interests between the Indemnified Party and any other party represented by such counsel in such proceeding; provided further that in no event shall the Indemnifying Party be required to pay the expenses of more than one law firm per jurisdiction as counsel for the Indemnified Party. The Indemnifying Party also shall be responsible for the expenses of such defense if the Indemnifying Party does not elect to assume such defense. No Indemnifying Party, in the defense of any such claim or litigation shall, except with the consent of each Indemnified Party, consent to entry of any judgment or enter into any settlement which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party of a release from all liability in respect of such claim or litigation, and no Indemnified Party shall consent to entry of any judgment or settle such claim or litigation without the prior written consent of the Indemnifying Party, which consent shall not be unreasonably withheld.

(d) In order to provide for just and equitable contribution in circumstances in which the indemnification provided for in this Section 2.5 is due in accordance with its terms but for any reason is held to be unavailable to an Indemnified Party in respect to any losses, claims, damages and liabilities referred to herein, then the Indemnifying Party shall, in lieu of indemnifying such Indemnified Party, contribute to the amount paid or payable by such Indemnified Party as a result of such losses, claims, damages or liabilities to which such party may be subject in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party on the one hand and Indemnified Party on the other in connection with the statements or omissions which resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative fault of a party shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of material fact related to information supplied by such party and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the sellers of Registrable Shares agree that it would not be just and equitable if contribution pursuant to this Section 2.5 were determined by pro rata allocation or by any other method of allocation which does not take account of the equitable considerations referred to above. Notwithstanding the provisions of this paragraph of Section 2.5, in no case shall any one seller of Registrable Shares be liable or responsible for any amount in excess of the net proceeds received by such seller of Registrable Shares from the offering of Registrable Shares; provided, however, that no person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. Any party entitled to contribution will, promptly after receipt of notice of commencement of any action, suit or proceeding against such party in respect of which a claim for contribution may be made against another party or parties under this Section 2.5, notify such party or parties from whom contribution may be sought, but the omission so to notify such party or parties from whom contribution may be sought shall not relieve such party from any other obligation it or they may have thereunder or otherwise under this Section. No party shall be liable for contribution with respect to any action, suit, proceeding or claim settled without its prior written consent, which consent shall not be unreasonably withheld.

2.6. Other Matters with Respect to Underwritten Offerings. In the event that Registrable Shares are sold pursuant to a Registration Statement in an underwritten offering pursuant to Section 2.1 or Section 2.2, the Company agrees to (a) enter into an underwriting agreement containing customary representations and warranties with respect to the business and operations of the Company and customary covenants and agreements to be performed by the Company, including without limitation customary provisions with respect to indemnification by the Company of the underwriters of such offering; (b) use its reasonable best efforts to cause its legal counsel to render customary opinions to the underwriters with respect to the Registration Statement; and (c) use its reasonable best efforts to cause its independent public accounting firm to issue customary "cold comfort letters" to the underwriters with respect to the Registration Statement; and (d) cause each of its directors and executive officers to execute a lock-up, holdback or similar agreement (not to exceed 90 days) on terms reasonably requested by the underwriter(s) managing such underwritten offering.

2.7. Information by Holder. As a condition to the Company's obligation to register the Registrable Shares of any holder, such holder shall furnish to the Company such information regarding such holder and the distribution proposed by such holder as the Company may reasonably request in writing and as shall be required in connection with any registration, qualification or compliance referred to in this Agreement.

2.8. Confidentiality of Notices. Any Stockholder receiving any written notice from the Company regarding the Company's plans to file a Registration Statement shall treat such notice confidentially and shall not disclose such information to any person other than as necessary to exercise its rights under this Agreement.

2.9. Limitations on Subsequent Registration Rights. The Company shall not, without the prior written consent of Stockholders holding at least a majority of the Registrable Shares then held by all Stockholders, enter into any agreement (other than this Agreement) with any holder or prospective holder of any securities of the Company which grant such holder or prospective holder rights to include securities of the Company in any Registration Statement, unless (a) such rights to include securities in a registration initiated by the Company or by Stockholders are junior in all respects to the rights granted to Other Holders under Sections 2.1 and 2.2 of this Agreement, and (b) any such rights to initiate a registration provide that Stockholders are entitled to include Registrable Shares in priority to such holders.

2.10. Rule 144 Requirements. After the earliest of (i) the closing of the sale of securities of the Company pursuant to a Registration Statement, (ii) the registration by the Company of a class of securities under Section 12 of the Exchange Act, or (iii) the issuance by the Company of an offering circular pursuant to Regulation A under the Securities Act, the Company agrees to, so long as any Stockholder is a holder of Registrable Shares:

(a) make and keep current public information about the Company available, as those terms are understood and defined in Rule 144;

(b) use its reasonable best efforts to 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 (at any time after it has become subject to such reporting requirements); and

(c) furnish to any holder of Registrable Shares upon request (i) a written statement by the Company as to its compliance with the reporting requirements of Rule 144 and of the Securities Act and the Exchange Act (at any time after it has become subject to such reporting requirements), (ii) a copy of the most recent annual or quarterly report of the Company, and (iii) such other reports and documents of the Company as such holder may reasonably request to avail itself of any similar rule or regulation of the Commission allowing it to sell any such securities without registration.

2.11. Termination. The right of any Stockholder to request registration or inclusion of Registrable Shares in any registration pursuant to Sections 2.1 and 2.2 of this Agreement or to receive any notices hereunder or to vote with respect to any amendment hereunder shall terminate upon the earliest of (i) eight (8) years after the closing of the Initial Public Offering, (ii) the date on which such Stockholder holds no Registrable Shares, (iii) a Company Sale, (iv) at such time as SEC Rule 144 or another similar exemption under the Securities Act is available for the sale of all of such Stockholder's Registrable Shares without limitation during a three (3) month period without registration or (v) at such time at which such Stockholder is not an affiliate (as defined under the Act) of the Company.

3. [Reserved].

4. Transfers of Rights.

(a) This Agreement, and the rights and obligations of each Stockholder hereunder, may be assigned by such Stockholder to (i) any affiliate (as defined under the Act), partner or stockholder of such Stockholder to which such Stockholder transfers at least ten percent (10%) of the aggregate shares of Common Stock held by such Stockholder (or one hundred percent (100%) of the Shares purchased by such Stockholder if fewer than five hundred thousand (500,000) (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization occurring after the date of this Agreement)), and such transferee shall be deemed a "Stockholder" for purposes of this Agreement, provided that no transfer shall be made to any entity that is a competitor of the Company as determined in good faith by the Board of Directors of the Company; provided further that the transferee provides prior written notice of such assignment to the Company and agrees in writing to be bound hereby as a "Stockholder".

(b) [Reserved].

(c) Each Institutional Investor (as defined in Section 6(j) below) may assign this Agreement and its rights and obligations hereunder to any entity that may be considered an affiliate (as defined in Rule 12b-2 promulgated under the Exchange Act) of such Institutional Investor and such affiliate of such Institutional Investor shall be deemed a "Stockholder" for purposes of this Agreement, and all such affiliates of such Institutional Investor may from time to time reassign their rights to other affiliates of such Institutional Investor; provided that the transferee provides written notice of such assignment to the Company and agrees to be bound by the terms and conditions set forth herein as a "Stockholder".

5. Covenants

5.1. Perceptive Directors.

(a) For so long as Perceptive (including for the avoidance of doubt any affiliates (as defined under the Act) of Perceptive and its permitted assignees under Section 4) beneficially owns at least the percentage of the total Voting Securities outstanding equal to the percentage of the total Voting Securities set forth in the table below under the column "Voting Securities held by Perceptive as a Percentage of total Voting Securities", the Company shall take all reasonable actions within its control to include in the slate of nominees, recommended by the Board of Directors and/or the applicable committee thereof for election as directors at each applicable annual or special meeting of stockholders at which directors are to be elected, that number of individuals designated by Perceptive that, if elected, will result in Perceptive having the number of directors serving on the Board of Director that is shown in the column labeled "Number of Perceptive Directors" below.

Voting Securities held by Perceptive as a Percentage of Total Voting Securities	**Number of Perceptive Directors**
20% or greater	2
10% or greater, but less than 20%	1
Less than 10%	0

(b) In the event the Board of Directors reasonably finds the nominee to be unsuitable and reasonably objects to the identified director, Perceptive shall be entitled to propose a different nominee to the Board of Directors within thirty (30) days of the Company's notice to such person of its objection to the nominee.

5.2. North Bridge Director.

(a) For so long as North Bridge (including for the avoidance of doubt any affiliates (as defined under the Act) of North Bridge and its permitted assignees under Section 4) beneficially owns at least the percentage of the total Voting Securities outstanding equal to the percentage of the total Voting Securities set forth in the table below under the column "Voting Securities held by North Bridge as a Percentage of total Voting Securities", the Company shall take all reasonable actions within its control to include in the slate of nominees, recommended by the Board of Directors and/or the applicable committee thereof for election as directors at each applicable annual or special meeting of stockholders at which directors are to be elected, that number of individuals designated by North Bridge that, if elected, will result in North Bridge having the number of directors serving on the Board of Director that is shown in the column labeled "Number of North Bridge Directors" below.

Voting Securities held by North Bridge as a Percentage of Total Voting Securities	**Number of North Bridge Directors**
10% or greater	1
Less than 10%	0

(b) In the event the Board of Directors reasonably finds the nominee to be unsuitable and reasonably objects to the identified director, North Bridge shall be entitled to propose a different nominee to the Board of Directors within thirty (30) days of the Company's notice to such person of its objection to the nominee.

5.3. Any director serving on the Board of Directors pursuant to this Section 5 shall be entitled to the same expense reimbursement, benefits, indemnity, exculpation and other arrangements as are provided to the other non-management members of the Board of Directors.

6. General.

(a) Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement.

(b) Specific Performance. In addition to any and all other remedies that may be available at law in the event of any breach of this Agreement, each Stockholder shall be entitled to specific performance of the agreements and obligations of the Company hereunder and to such other injunctive or other equitable relief as may be granted by a court of competent jurisdiction.

(c) Governing Law; Dispute Resolution. This Agreement shall be governed by and construed in accordance with the internal laws of the State of Delaware (without reference to the conflicts of law provisions thereof). The parties (a) hereby irrevocably and unconditionally submit to the jurisdiction of the state courts of Delaware and to the jurisdiction of the United States District Court for the District of Delaware for the purpose of any suit, action or other proceeding arising out of or based upon this Agreement, (b) agree not to commence any suit, action or other proceeding arising out of or based upon this Agreement except in the state courts of Delaware or the United States District Court for the District of Delaware, and (c) hereby waive, and agree not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above-named courts, that its property is exempt or immune from attachment or execution, that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court. WAIVER OF JURY TRIAL: EACH PARTY HEREBY WAIVES ITS RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT, THE OTHER TRANSACTION DOCUMENTS, THE SECURITIES OR THE SUBJECT MATTER HEREOF OR THEREOF. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL-ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS TRANSACTION, INCLUDING, WITHOUT LIMITATION, CONTRACT CLAIMS, TORT CLAIMS (INCLUDING NEGLIGENCE), BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. THIS SECTION HAS BEEN FULLY DISCUSSED BY EACH OF THE PARTIES HERETO AND THESE PROVISIONS WILL NOT BE SUBJECT TO ANY EXCEPTIONS. EACH PARTY HERETO HEREBY FURTHER WARRANTS AND REPRESENTS THAT SUCH PARTY HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL, AND THAT SUCH PARTY KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

(d) Notices. All notices, requests, consents, and other communications under this Agreement shall be in writing and shall be deemed delivered (i) two business days after being sent by registered or certified mail, return receipt requested, postage prepaid or (ii) one business day after being sent via a reputable nationwide overnight courier service guaranteeing next business day delivery, in each case to the intended recipient as set forth below:

If to the Company, Lyra Therapeutics, Inc., 480 Arsenal Street, Watertown, MA 02472, Attn: Chief Executive Officer, or at such other address or addresses as may have been furnished in writing by the Company to the Investors, with a copy to Latham & Watkins LLP, 200 Clarendon Street, 27th Floor, Boston, Massachusetts 02116, Attn: Peter N. Handrinos, Esq.; or

If to an Investor, at his or its address set forth on Schedule A, or at such other address or addresses as may have been furnished to the Company in writing by such an Investor, with a copy to: Cooley LLP, 500 Boylston Street, 14th Floor, Boston, MA 02116-3736, Attention: Marc Recht.

Any party may give any notice, request, consent or other communication under this Agreement using any other means (including, without limitation, personal delivery, messenger service, telecopy, first class mail or electronic mail), but no such notice, request, consent or other communication shall be deemed to have been duly given unless and until it is actually received by the party for whom it is intended. Any party may change the address to which notices, requests, consents or other communications hereunder are to be delivered by giving the other parties notice in the manner set forth in this Section.

(e) Complete Agreement. This Agreement constitutes the entire agreement and understanding of the parties hereto with respect to the subject matter hereof and supersedes all prior agreements and understandings relating to such subject matter.

(f) Amendments and Waivers. Any term of this Agreement may be amended or terminated and the observance of any term of this Agreement may be waived (either generally or in a particular instance and either retroactively or prospectively), with the written consent of the Company and the holders of a majority of the Registrable Shares held by all of the Stockholders; provided that (i) any amendment, termination or waiver of any term of this Agreement which has a disproportionately adverse effect on any Investor shall also require the written consent of such Investor; (ii) this Agreement may be amended with the consent of the holders of less than all Registrable Shares only in a manner which affects all such holders in the same fashion and no amendment shall be effected to any provision hereof which will have the effect of reducing the approval threshold for any matter herein unless such amendment is approved by holders holding such threshold of votes; (iii) Section 5.1 and this Section 6(f)(iii) may not be amended, modified, terminated or waived without the prior written consent of Perceptive; and (iv) Section 5.2 and this Section 6(f)(iv) may not be amended, modified, terminated or waived without the prior written consent of North Bridge. Any such amendment, termination or waiver effected in accordance with this Section 6(f) shall be binding on all parties hereto, even if they do not execute such consent. No waivers of or exceptions to any term, condition or provision of this Agreement, in any one or more instances, shall be deemed to be, or construed as, a further or continuing waiver of any such term, condition or provision.

(g) Pronouns. Whenever the context may require, any pronouns used in this Agreement shall include the corresponding masculine, feminine or neuter forms, and the singular form of nouns and pronouns shall include the plural, and vice versa.

(h) Counterparts; Facsimile Signatures. This Agreement may be executed and delivered by facsimile signature and in any number of counterparts, each of which shall be deemed to be an original, and all of which together shall constitute one and the same document.

(i) Section Headings. The section headings are for the convenience of the parties and in no way alter, modify, amend, limit or restrict the contractual obligations of the parties.

(j) One Holder. For purposes of determining the number of Shares held by each Stockholder under this Agreement, (i) all affiliates (as defined under the Act) of North Bridge and its permitted assignees under Section 4 shall be deemed to be one holder and (ii) all affiliates (as defined under the Act) of Perceptive and its permitted assignees under Section 4 shall be deemed to be one holder (with North Bridge and Perceptive, collectively the "Institutional Investors" and each an "Institutional Investor").

(k) Addition of Investors. Notwithstanding anything to the contrary contained herein, with the written consent of the Company and the holders of a majority of the Registrable Shares, any holder of shares of Common Stock may become a party to this Agreement by executing and delivering an additional counterpart signature page to this Agreement, and thereafter shall be deemed an "Investor" for all purposes hereunder.

(l) Prior IRA. The Prior IRA is hereby amended and restated in its entirety and restated herein. Such amendment and restatement is effective upon execution of this Agreement by the Company and the Investors constituting the requisite votes necessary to amend such Prior IRA. Upon such execution, all provisions of, rights granted and covenants made in the Prior IRA are hereby waived, released and superseded in their entirety and shall have no further force or effect.

(m) Confidentiality. Each Stockholder agrees that such Stockholder will keep confidential and will not disclose, divulge, or use for any purpose (other than to monitor its investment in the Company) any confidential information obtained from the Company pursuant to the terms of this Agreement or in connection with the Company's attempt to amend or seek any waiver of the terms of this Agreement (including notice of the Company's intention to file a registration statement or to seek any amendment of or waiver thereunder), unless such confidential information (a) is known or becomes known to the public in general (other than as a result of a breach of this Section 6(m) by such Stockholder), (b) is or has been independently developed or conceived by such Stockholder without use of the Company's confidential information, or (c) is or has been made known or disclosed to such Stockholder by a third party without a breach of any obligation of confidentiality such third party may have to the Company; provided, however, that a

Stockholder may disclose confidential information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with monitoring its investment in the Company; (ii) to any prospective purchaser of any Registrable Shares from such Stockholder, if such prospective purchaser agrees to be bound by the provisions of this Section 6(m); (iii) to any existing or prospective affiliate (as defined under the Act), partner, member, stockholder, or wholly owned subsidiary of such Stockholder in the ordinary course of business, provided that such Stockholder informs such person that such information is confidential and directs such person to maintain the confidentiality of such information; or (iv) as may otherwise be required by law, provided that such Stockholder promptly notifies the Company of such disclosure and takes reasonable steps to minimize the extent of any such required disclosure

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the parties have executed this Ninth Amended and Restated Investor Rights Agreement as of the date first written above.

LYRA THERAPEUTICS, INC.

By: /s/ Maria Palasis
Name: Maria Palasis, Ph.D.
Title: Chief Executive Officer

IN WITNESS WHEREOF, the parties have executed this Ninth Amended and Restated Investor Rights Agreement as of the date first written above.

INVESTORS:

NORTH BRIDGE VENTURE PARTNERS V-A, L.P.

By: North Bridge Venture Management V, L.P., its General Partner

By: NBVM GP, LLC, its General Partner

By: /s/ Edward T. Anderson
Name: Edward T. Anderson
Title: Manager

NORTH BRIDGE VENTURE PARTNERS V-B, L.P.

By: North Bridge Venture Management V, L.P., its General Partner

By: NBVM GP, LLC its General Partner

By: /s/ Edward T. Anderson
Name: Edward T. Anderson
Title: Manager

NORTH BRIDGE VENTURE PARTNERS VI, L.P.

By: North Bridge Venture Management VI, L.P., its General Partner

By: NBVM GP, LLC, its General Partner

By: /s/ Edward T. Anderson
Name: Edward T. Anderson
Title: Manager

IN WITNESS WHEREOF, the parties have executed this Ninth Amended and Restated Investor Rights Agreement as of the date first written above.

INVESTORS:

PERCEPTIVE LIFE SCIENCES MASTER FUND, LTD.

By: /s/ James H. Mannix
Name: James H. Mannix
Title: Chief Operating Officer

PERCEPTIVE LS (A), LLC

By: Perceptive LS GP, LLC, its Manager

By: /s/ Joseph Edelman
Name: Joseph Edelman
Title: Investment Manager

SCHEDULE A

Investors

North Bridge Venture Partners V-A, L.P.
60 William Street, Suite 350
Wellesley, MA 02481
Telephone: 781-290-0004
Email: eta@northbridge.com

North Bridge Venture Partners V-B, L.P.
60 William Street, Suite 350
Wellesley, MA 02481
Telephone: 781-290-0004
Email: eta@northbridge.com

North Bridge Venture Partners VI, L.P.
60 William Street, Suite 350
Wellesley, MA 02481
Telephone: 781-290-0004
Email: eta@northbridge.com

Perceptive Life Sciences Master Fund, Ltd
51 Astor Place, 10th Floor
New York, NY 10003

Perceptive LS (A), LLC
51 Astor Place, 10th Floor
New York, NY 10003

Exhibit 4.2

LYRA THERAPEUTICS, INC.
Schedule of Holders of Warrants to Purchase Common Stock

Holder	Warrant No.	Number of Shares
Venrock Healthcare Capital Partners EG, L.P.	PFCS-1	1,956,500
Venrock Healthcare Capital Partners III, L.P.	PFCS-2	1,739,000
VHCP Co-Investment Holdings III, LLC	PFCS-3	174,000
Venrock Healthcare Capital Partners II, L.P.	PFCS-4	804,500
VHCP Co-Investment Holdings II, LLC	PFCS-5	326,000

THIS WARRANT AND THE SHARES OF COMMON STOCK ISSUED UPON ITS EXERCISE ARE SUBJECT TO THE RESTRICTIONS ON TRANSFER SET FORTH IN SECTION 5 OF THIS WARRANT

Warrant No. PFCS-[•]

Number of Shares: [•] (subject to adjustment)

Date of Issuance: April 12, 2022

Original Issue Date (as defined in subsection 2(a)): April 12, 2022

Lyra Therapeutics, Inc.

Common Stock Purchase Warrant

(Void after 5:00 p.m. (New York City time) on April 12, 2027)

Lyra Therapeutics, Inc., a Delaware corporation (the "Company"), for value received, hereby certifies that [•], or its registered assigns (the "Registered Holder"), is entitled, subject to the terms and conditions set forth below, to purchase from the Company, at any time or from time to time on or after the date of issuance and on or before 5:00 p.m. (New York City time) on April 12, 2027, shares of Common Stock, $0.001 par value per share, of the Company ("Common Stock"), at a purchase price of $0.001 per share. The shares purchasable upon exercise of this Warrant, and the purchase price per share, each as adjusted from time to time pursuant to the provisions of this Warrant, are hereinafter referred to as the "Warrant Shares" and the "Purchase Price," respectively. This Warrant is one of the Common Stock Purchase Warrants (the "Warrants") issued pursuant to that certain Securities Purchase Agreement, dated as of April 7, 2022, by and among the Company and each of the investors party thereto (the "Purchase Agreement"). Capitalized terms used herein have the respective meanings ascribed thereto in the Purchase Agreement unless otherwise defined herein.

1. Exercise.

(a) Exercise for Cash. Subject to the limitations set forth in Section 1(e), the Registered Holder may elect to exercise this Warrant, in whole or in part and at any time or from time to time, by surrendering this Warrant, with the purchase form appended hereto as Exhibit I duly executed by or on behalf of the Registered Holder, at the principal office of the Company, or at such other office or agency as the Company may designate, accompanied by payment in full, in lawful money of the United States, of the Purchase Price payable in respect of the number of Warrant Shares purchased upon such exercise.

(b) Cashless Exercise. Subject to the limitations set forth in Section 1(e), the Registered Holder may also elect to exercise this Warrant, in whole or in part, on a cashless basis, by surrendering this Warrant, with the purchase form appended hereto as Exhibit I duly executed by or on behalf of the Registered Holder, at the principal office of the Company, or at such other office or agency as the Company may designate, by canceling a portion of this Warrant in payment of the Purchase Price payable in respect of the number of Warrant Shares purchased upon such

exercise. In the event of an exercise pursuant to this subsection 1(b), the number of Warrant Shares issued to the Registered Holder shall be determined according to the following formula:

$$\frac{[(A-B)*(X)]}{(A)}$$

Where:

A = the VWAP on the Trading Day immediately preceding the date of such election;

B = the Purchase Price then in effect; and

X = the number of Warrant Shares for which this Warrant is being exercised (which shall include both the number of Warrant Shares issued to the Registered Holder and the number of Warrant Shares subject to the portion of the Warrant being cancelled in payment of the Purchase Price).

The "VWAP" means, for any date, the price determined by the first of the following clauses that applies: (i) if the Common Stock is then listed on The Nasdaq Global Select Market, The Nasdaq Global Market, The Nasdaq Capital Market or the New York Stock Exchange (such market, the "Trading Market"), the daily volume-weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market as reported by Bloomberg Financial L.P. (based on a "Trading Day" from 9:30 a.m. Eastern Time to 4:02 p.m. Eastern Time); (ii) the volume-weighted average price of the Common Stock for such date (or the nearest preceding date) on the OTC Bulletin Board; (iii) if the Common Stock is not then listed on a Trading Market or quoted on the OTC Bulletin Board and if prices for the Common Stock are then reported in the "Pink Sheets" published by the Pink Sheets, LLC (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported; or (iv) in all other cases, the fair market value of a share of Common Stock as determined by a good faith determination of the Company's Board of Directors.

(c) Exercise Date. Each exercise of this Warrant shall be deemed to have been effected immediately prior to the close of business on the day on which this Warrant shall have been surrendered to the Company as provided in subsection 1(a) or 1(b) above (the "Exercise Date"). At such time, the person or persons in whose name or names any certificates for Warrant Shares shall be issuable upon such exercise as provided in subsection 1(d) below shall be deemed to have become the holder or holders of record of the Warrant Shares represented by such certificates.

(d) Issuance Upon Exercise. As soon as practicable after the exercise of this Warrant in whole or in part, and in any event within 5 days thereafter, the Company, at its expense, will cause to be issued in the name of, and delivered to, the Registered Holder, or as the Registered Holder (upon payment by the Registered Holder of any applicable transfer taxes) may direct:

(i) a certificate or certificates for the number of full Warrant Shares to which the Registered Holder shall be entitled upon such exercise transmitted by the transfer agent of the Company to the Registered Holder in electronic book entry form to the account of such Registered Holder or, upon request of the Registered Holder, by physical delivery to the address specified by the Registered Holder, *plus*, in lieu of any fractional share to which the Registered Holder would otherwise be entitled, cash in an amount determined pursuant to Section 3 hereof; and

(ii) in case such exercise is in part only, a new warrant or warrants (dated the date hereof) of like tenor, calling in the aggregate on the face or faces thereof for the number of Warrant Shares equal (without giving effect to any adjustment therein) to the number of such shares called for on the face of this Warrant minus the number of Warrant Shares for which this Warrant was so exercised (which, in the case of an exercise pursuant to subsection 1(b), shall include both the number of Warrant Shares issued to the Registered Holder pursuant to such partial exercise and the number of Warrant Shares subject to the portion of the Warrant being cancelled in payment of the Purchase Price).

(e) Limitations on Exercise. Subject to the last sentence of this Section 1(e), the Company shall not effect the exercise of this Warrant, and the Registered Holder shall not have the right to exercise this Warrant, to the extent that after giving effect to such exercise, such Registered Holder (together with such Registered Holder's Affiliates and any other Persons acting as a group together) would beneficially own in excess of 9.999% (the "Maximum Percentage") of the shares of Common Stock outstanding immediately after giving effect to such exercise. For purposes of the foregoing sentence, the aggregate number of shares of Common Stock beneficially owned by such Person and its Affiliates shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which the determination of such sentence is being made, but shall exclude shares of Common Stock which would be issuable upon (i) exercise of the remaining, unexercised portion of this Warrant beneficially owned by such Person and its Affiliates and (ii) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company beneficially owned by such Person and its Affiliates (including, without limitation, any convertible notes or convertible preferred stock or warrants) subject to a limitation on conversion or exercise analogous to the limitation contained herein. For purposes of this Warrant, in determining the number of outstanding shares of Common Stock, the Registered Holder may rely on the number of outstanding shares of Common Stock as reflected in (x) the Company's most recent Form 10-K, Proxy Statement, Form 10-Q, Current Report on Form 8-K or other public filing with the Securities and Exchange Commission, as the case may be, (y) a more recent public announcement by the Company or (z) any other notice by the Company or the Company's transfer agent setting forth the number of shares of Common Stock outstanding. For any reason at any time, upon the written or oral request of the Registered Holder, where such request indicates that it is being made pursuant to this Warrant, the Company shall within one (1) Trading Day confirm orally and in writing to the Registered Holder the number of shares of Common Stock then 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 the Warrants, by the Registered Holder and its Affiliates since the date as of which such number of outstanding shares of Common Stock was reported. Upon delivery of a written notice to the Company, the Registered Holder may from time to time increase or decrease the Maximum Percentage to any other percentage as specified in such notice; provided that in no event shall such Maximum Percentage be increased to more than 19.99%; provided, further, that (i) any such increase in the Maximum Percentage will not be effective until the sixty-first (61st) day after such notice is delivered to the Company and (ii) any such increase or decrease will apply only to the

Registered Holder and not to any other holder of Warrants. For purposes of clarity, the shares of Common Stock issuable pursuant to the terms of this Warrant in excess of the Maximum Percentage shall not be deemed to be beneficially owned by the Registered Holder for any purpose including for purposes of Section 13(d) or Rule 16a-1(a)(1) of the 1934 Act. 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. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 1(e) to the extent necessary to correct this paragraph or any portion of this paragraph which may be defective or inconsistent with the intended beneficial ownership limitation contained in this Section 1(e) or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations set forth in this Section 1(e) shall not apply to exercises of this Warrant that occur prior to and expressly in connection with the Company's consummation of a Fundamental Transaction. Unless earlier exercised, this Warrant shall automatically be deemed exercised in accordance with the provisions of Section 1(b) hereof immediately prior to the consummation of a Fundamental Transaction. "Fundamental Transaction" means that (A) the Company shall, directly or indirectly, in one or more related transactions, (i) consolidate or merge with or into (whether or not the Company is the surviving corporation) another Person, or (ii) sell, assign, transfer, convey or otherwise dispose of all or substantially all of the properties or assets of the Company to another Person, or (iii) allow another Person to make a purchase, tender or exchange offer that is accepted by the holders of more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the Person or Persons making or party to, or associated or affiliated with the Persons making or party to, such purchase, tender or exchange offer), or (iv) execute a stock purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) 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) or (B) any "person" or "group" (as these terms are used for purposes of Sections 13(d) and 14(d) of the 1934 Act) is or shall become the "beneficial owner" (as defined in Rule 13d-3 under the 1934 Act), directly or indirectly, of more than 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock.

2. Adjustments.

(a) Adjustment for Stock Splits and Combinations. If the Company shall at any time or from time to time after the date on which this Warrant was first issued (or, if this Warrant was issued upon partial exercise of, or in replacement of, another warrant of like tenor, then the date on which such original warrant was first issued) (either such date being referred to as the "Original Issue Date") effect a subdivision of the outstanding Common Stock, the Purchase Price then in effect immediately before that subdivision shall be proportionately decreased. If the Company shall at any time or from time to time after the Original Issue Date combine the outstanding shares of Common Stock, the Purchase Price then in effect immediately before the combination shall be proportionately increased. Any adjustment under this paragraph shall become effective at the close of business on the date the subdivision or combination becomes effective.

(b) Adjustment for Certain Dividends and Distributions. In the event the Company at any time, or from time to time after the Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in additional shares of Common Stock, then and in each such event the Purchase Price then in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the Purchase Price then in effect immediately before such event by a fraction:

(1) the numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(2) the denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution;

provided, however, that if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the Purchase Price shall be recomputed accordingly as of the close of business on such record date and thereafter the Purchase Price shall be adjusted pursuant to this paragraph as of the time of actual payment of such dividends or distributions.

(c) Adjustment in Number of Warrant Shares. When any adjustment is required to be made in the Purchase Price pursuant to subsections 2(a) or 2(b), the number of Warrant Shares purchasable upon the exercise of this Warrant shall be changed to the number determined by dividing (i) an amount equal to the number of shares issuable upon the exercise of this Warrant immediately prior to such adjustment, multiplied by the Purchase Price in effect immediately prior to such adjustment, by (ii) the Purchase Price in effect immediately after such adjustment.

(d) Adjustments for Other Dividends and Distributions. In the event the Company at any time or from time to time after the Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Company (other than shares of Common Stock) or in cash or other property (other than regular cash dividends paid out of earnings or earned surplus, determined in accordance with generally accepted accounting principles), then and in each such event provision shall be made so that the Registered Holder shall receive upon exercise hereof, in addition to the number of shares of Common Stock issuable hereunder, the kind and amount of securities of the Company, cash or other property which the Registered Holder would have been entitled to receive had this Warrant been exercised on the date of such event and had the Registered Holder thereafter, during the period from the date of such event to and including the Exercise Date, retained any such securities receivable during such period, giving application to all adjustments called for during such period under this Section 2 with respect to the rights of the Registered Holder.

(e) Adjustment for Reorganization. If there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Company in which the Common Stock is converted into or exchanged for securities, cash or other property (other than a transaction covered by subsections 2(a), 2(b) or 2(d)) (collectively, a "Reorganization"), then, following such Reorganization, the Registered Holder shall receive upon exercise hereof the kind and amount of securities, cash or other property which the Registered Holder would have been entitled to receive pursuant to such Reorganization if such exercise had taken place immediately prior to such Reorganization. In any such case, appropriate adjustment (as determined in good faith by the Board) shall be made in the application of the provisions set forth herein with respect to the rights and interests thereafter of the Registered Holder, to the end that the provisions set forth in this Section 2 (including provisions with respect to changes in and other adjustments of the Purchase Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities, cash or other property thereafter deliverable upon the exercise of this Warrant.

(f) Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Purchase Price pursuant to this Section 2, the Company at its expense shall, as promptly as reasonably practicable but in any event not later than 10 days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to the Registered Holder a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property for which this Warrant shall be exercisable and the Purchase Price). The Company shall, as promptly as reasonably practicable after the written request at any time of the Registered Holder (but in any event not later than 10 days thereafter), furnish or cause to be furnished to the Registered Holder a certificate setting forth (i) the Purchase Price then in effect and (ii) the number of shares of Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the exercise of this Warrant.

(g) All calculations under this Section 2 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be.

3. Fractional Shares. The Company shall not be required upon the exercise of this Warrant to issue any fractional shares, but shall pay the value thereof to the Registered Holder in cash on the basis of the VWAP used in connection with the calculation set forth in subsection 1(b) above upon the applicable exercise.

4. Investment Representations. The initial Registered Holder represents and warrants to the Company as follows:

(a) Investment. The Registered Holder is acquiring the Warrant, and (if and when the Registered Holder exercises this Warrant) the Registered Holder will acquire the Warrant Shares, for the Registered Holder's own account for investment and not with a view to, or for sale in connection with, any distribution thereof, nor with any present intention of distributing or selling the same; and the Registered Holder has no present or contemplated agreement, undertaking, arrangement, obligation, indebtedness or commitment providing for the disposition thereof.

(b) Accredited Investor. The Registered Holder is an "accredited investor" as defined in Rule 501(a) under the 1933 Act.

(c) Experience. The Registered Holder has made such inquiry concerning the Company and its business and personnel the Registered Holder he has deemed appropriate; and the Registered Holder has sufficient knowledge and experience in finance and business that the Registered Holder is capable of evaluating the risks and merits of the Registered Holder's investment in the Company.

5. Transfers, etc.

(a) This Warrant and the Warrant Shares shall not be sold or transferred unless either (i) they first shall have been registered under the Act, or (ii) the Company first shall have been furnished with an opinion of legal counsel, reasonably satisfactory to the Company, to the effect that such sale or transfer is exempt from the registration requirements of the Act.

(b) The Registered Holder acknowledges and agrees that the Warrant Shares shall be subject to the restrictive legend requirements set forth in the Purchase Agreement.

(c) The Company will maintain a register containing the name and address of the Registered Holder of this Warrant. The Registered Holder may change the Registered Holder's address as shown on the warrant register by written notice to the Company requesting such change.

(d) Subject to the provisions of Section 5 hereof, this Warrant and all rights hereunder are transferable, in whole or in part, upon surrender of this Warrant with a properly executed assignment (in the form of Exhibit II hereto) at the principal office of the Company (or, if another office or agency has been designated by the Company for such purpose, then at such other office or agency).

6. Notices of Record Date, etc. In the event:

(a) the Company shall take a record of the holders of its Common Stock (or other stock or securities at the time deliverable upon the exercise of this Warrant) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of stock of any class or any other securities, or to receive any other right; or

(b) of any capital reorganization of the Company, any reclassification of the Common Stock of the Company, any consolidation or merger of the Company with or into another corporation (other than a consolidation or merger in which the Company is the surviving entity and its Common Stock is not converted into or exchanged for any other securities or property), or any transfer of all or substantially all of the assets of the Company; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Company,

then, and in each such case, the Company will send or cause to be sent to the Registered Holder a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other stock or securities at the time deliverable upon the exercise of this Warrant) shall be entitled to exchange their shares of Common Stock (or such other stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up. Such notice shall be sent at least 3 days prior to the record date or effective date for the event specified in such notice, and the Registered Holder shall keep any such notice confidential.

7. Reservation of Stock. The Company will at all times reserve and keep available, solely for issuance and delivery upon the exercise of this Warrant, such number of Warrant Shares and other securities, cash and/or property, as from time to time shall be issuable upon the exercise of this Warrant. Such reservation shall comply without regard to the provisions of Section 1(e).

8. Exchange or Replacement of Warrants.

(a) Upon the surrender by the Registered Holder, properly endorsed, to the Company at the principal office of the Company, the Company will, subject to the provisions of Section 5 hereof, issue and deliver to or upon the order of the Registered Holder, at the Company's expense, a new Warrant or Warrants of like tenor, in the name of the Registered Holder or as the Registered Holder (upon payment by the Registered Holder of any applicable transfer taxes) may direct, calling in the aggregate on the face or faces thereof for the number of shares of Common Stock (or other securities, cash and/or property) then issuable upon exercise of this Warrant.

(b) Upon receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and (in the case of loss, theft or destruction) upon delivery of an indemnity agreement (with surety if reasonably required) in an amount reasonably satisfactory to the Company, or (in the case of mutilation) upon surrender and cancellation of this Warrant, the Company will issue, in lieu thereof, a new Warrant of like tenor.

9. Notices. All notices and other communications from the Company to the Registered Holder in connection herewith shall be mailed by certified or registered mail, postage prepaid, or sent via a reputable nationwide overnight courier service guaranteeing next business day delivery, or sent by electronic mail, to the address or electronic mail address last furnished to the Company in writing by the Registered Holder. All notices and other communications from the Registered Holder to the Company in connection herewith shall be mailed by certified or registered mail, postage prepaid, or sent via a reputable nationwide overnight courier service guaranteeing next business day delivery, to the Company at its principal office set forth below:

Lyra Therapeutics, Inc.
480 Arsenal Way
Watertown, MA 02472
Attention: Chief Executive Officer
E-mail: mpalasis@lyratx.com

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

Latham & Watkins LLP
200 Clarendon Street
Boston, MA 02116
Facsimile: (617) 948-6001
Attention: Wesley C. Holmes
E-mail: wesley.holmes@lw.com

If the Company should at any time change the location of its principal office to a place other than as set forth above, it shall give prompt written notice to the Registered Holder and thereafter all references in this Warrant to the location of its principal office at the particular time shall be as so specified in such notice. All such notices and communications shall be deemed delivered (i) two business days after being sent by certified or registered mail, return receipt requested, postage prepaid, (ii) one business day after being sent via a reputable nationwide overnight courier service guaranteeing next business day delivery, or (iii) when sent, if sent by electronic mail during normal business hours of the recipient, and if not sent during normal business hours, then on the first business day following such transmission.

10. No Rights as Stockholder. Until the exercise of this Warrant, the Registered Holder shall not have or exercise any rights by virtue hereof as a stockholder of the Company. Notwithstanding the foregoing, in the event (i) the Company effects a split of the Common Stock by means of a stock dividend and the Purchase Price of and the number of Warrant Shares are adjusted as of the date of the distribution of the dividend (rather than as of the record date for such dividend), and (ii) the Registered Holder exercises this Warrant between the record date and the distribution date for such stock dividend, the Registered Holder shall be entitled to receive, on the distribution date, the stock dividend with respect to the shares of Common Stock acquired upon such exercise, notwithstanding the fact that such shares were not outstanding as of the close of business on the record date for such stock dividend.

11. Amendment or Waiver. Any term of this Warrant may be amended or waived only by an instrument in writing signed by the party against which enforcement of the change or waiver is sought. No waivers of any term, condition or provision of this Warrant, in any one or more instances, shall be deemed to be, or construed as, a further or continuing waiver of any such term, condition or provision.

12. Section Headings. The section headings in this Warrant are for the convenience of the parties and in no way alter, modify, amend, limit or restrict the contractual obligations of the parties.

13. Governing Law. This Warrant shall be governed by, and construed in accordance with, the internal laws of the State of New York without regard to the choice of law principles thereof that would result in the application of the laws of any other jurisdiction.

14. Facsimile Signatures. This Warrant may be executed by facsimile signature.

[remainder of page intentionally left blank]

EXECUTED as of the Date of Issuance indicated above.

LYRA THERAPEUTICS, INC.

By: _____
Name: Maria Palasis, Ph.D.
Title: Chief Executive Officer

EXHIBIT I

PURCHASE FORM

To:_____ Dated:_____

The undersigned, pursuant to the provisions set forth in the attached Warrant (No. ___), hereby elects to purchase *(check applicable box)*:

☐ ____ shares of the Common Stock of Lyra Therapeutics, Inc. covered by such Warrant; or

☐ the maximum number of shares of Common Stock covered by such Warrant pursuant to the cashless exercise procedure set forth in subsection 1(b).

The undersigned herewith makes payment of the full purchase price for such shares at the price per share provided for in such Warrant. Such payment takes the form of *(check applicable box or boxes)*:

☐ $_____ in lawful money of the United States; and/or

☐ the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 1(b), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 1(b).

Signature: _____

Address: _____

_____

ASSIGNMENT FORM

FOR VALUE RECEIVED, _____ hereby sells, assigns and transfers all of the rights of the undersigned under the attached Warrant (No. ____) with respect to the number of shares of Common Stock of Lyra Therapeutics, Inc. covered thereby set forth below, unto:

Name of Assignee	Address and Electronic Mail Address	No. of Shares

Dated:_____ Signature:_____

Signature Guaranteed:

By: _____

Exhibit 10.1

SECURITIES PURCHASE AGREEMENT

This SECURITIES PURCHASE AGREEMENT (this "Agreement") is made and entered into as of April 7, 2022 by and among Lyra Therapeutics, Inc., a Delaware corporation (the "Company"), the Share Investors identified on Exhibit A attached hereto (each a "Share Investor" and collectively the "Share Investors") and the Warrant Investors identified on Exhibit B attached hereto (each a "Warrant Investor" and collectively the "Warrant Investors", and together with the Share Investors, each an "Investor" and collectively the "Investors").

RECITALS

A. The Company and each Investor is 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 "1933 Act"), and/or Rule 506 of Regulation D ("Regulation D") as promulgated by the United States Securities and Exchange Commission (the "SEC") under the 1933 Act;

B. The Share Investors wish to purchase from the Company, and the Company wishes to sell and issue to the Share Investors, upon the terms and subject to the conditions stated in this Agreement, shares (the "Shares") of the Company's Common Stock, par value $0.001 per share (the "Common Stock");

C. The Warrant Investors wish to purchase from the Company, and the Company wishes to sell and issue to the Warrant Investors, upon the terms and subject to the conditions stated in this Agreement, pre-funded warrants to purchase Common Stock in the form attached hereto as Exhibit C (the "Warrants" and, together with the Shares, the "Securities"); and

D. Contemporaneously with the sale of the Securities, (A) the parties hereto (other than North Bridge (as defined below) and Perceptive (as defined below)) will execute and deliver a Registration Rights Agreement, in the form attached hereto as Exhibit D (the "Registration Rights Agreement"), pursuant to which the Company will agree to provide certain registration rights in respect of the Shares and the Warrant Shares (as defined below) to be acquired by such parties pursuant hereto (the "RRA Covered Shares") under the 1933 Act, and the rules and regulations promulgated thereunder, and applicable state securities laws, and (B) the Company, North Bridge and Perceptive shall enter into (i) that certain Ninth Amended and Restated Investor Rights Agreement, dated as of the date hereof (as the same may be further amended and/or restated from time to time, the "Investor Rights Agreement"), pursuant to which, among other things, the Shares to be acquired by each of North Bridge and Perceptive pursuant hereto (the "IRA Covered Shares") shall be deemed to be "Registrable Shares" under the Investor Rights Agreement and (ii) a registration rights waiver (the "Investor Rights Agreement Waiver"), pursuant to which each of North Bridge and Perceptive shall waive certain registration rights under the Investor Rights Agreement relating to any registration statement filed by the Company pursuant to the Registration Rights Agreement covering the RRA Covered Shares.

In consideration of the mutual promises made herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Definitions. For the purposes of this Agreement, the following terms shall have the meanings set forth below:

"Affiliate" means, with respect to any Person, any other Person which directly or indirectly through one or more intermediaries Controls, is controlled by, or is under common Control with, such Person.

"Business Day" means a day, other than a Saturday or Sunday, on which banks in New York City are open for the general transaction of business.

"Closing" has the meaning set forth in Section 3.1.

"Closing Date" has the meaning set forth in Section 3.1.

"Company's Knowledge" means the actual knowledge of any executive officer (as defined in Rule 405 under the 1933 Act) of the Company after due inquiry of all employees in the direct reporting line of such officer.

"Company Covered Person" means, with respect to the Company as an "issuer" for purposes of Rule 506 promulgated under the Securities Act, any Person listed in the first paragraph of Rule 506(d)(1).

"Control" (including the terms "controlling", "controlled by" or "under common control with") means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

"EDGAR System" has the meaning set forth in Section 4.6.

"Environmental Laws" has the meaning set forth in Section 4.16.

"FCPA" means the Foreign Corrupt Practices Act of 1977, as amended.

"FDA" has the meaning set forth in Section 4.28.

"GAAP" has the meaning set forth in Section 4.18.

"Intellectual Property" means all patents, patent applications, registered and unregistered trademarks, trademark applications, registered and unregistered service marks, service mark applications, trade names, copyrights, trade secrets, licenses, domain names, information and proprietary rights and processes, and all other intellectual property rights in any jurisdiction.

"Investor Questionnaire" has the meaning set forth in Section 3.1.

"Investor Rights Agreement" means that certain Eighth Amended and Restated Investor Rights Agreement, dated as of January 10, 2020, by and among the Company and the investors party thereto, as amended by that certain Amendment No. 1 to Eighth Amended and Restated Investor Rights Agreement, dated as of December 5, 2020 (as amended, and as further amended and/or restated from time to time).

"Material Adverse Effect" means a circumstance that could reasonably be expected to be, individually or in the aggregate, a material adverse effect on (i) the assets, liabilities, results of operations, condition (financial or otherwise), earnings, business, prospects or properties of the Company and its Subsidiary taken as a whole, (ii) the legality or enforceability of any of the Transaction Documents or (iii) the ability of the Company to perform its obligations under the Transaction Documents; *provided*, *however*, that in no event shall any of the following occurring after the date hereof, alone or in combination, be deemed to constitute, or be taken into account in determining whether a Material Adverse Effect has occurred: (1) any adverse effect resulting directly or indirectly from general business or economic conditions, except to the extent such general business or economic conditions have a materially disproportionate effect on the Company as compared to companies in the Company's industry, (2) any change in the Company's stock price or trading volume, or (3) any effect caused by the announcement or pendency of the transactions contemplated by the Transaction Documents, or the identity of any Investor or any of its Affiliates as the purchaser in connection with the transactions contemplated by this Agreement or the Registration Rights Agreement.

"Material Contract" means any contract, instrument or other agreement to which the Company is a party or by which it is bound which is material to the business of the Company and has been or was required to have been filed as an exhibit to the SEC Filings pursuant to Item 601(b)(10) of Regulation S-K.

"Nasdaq" means The Nasdaq Global Market.

"North Bridge" means, collectively, North Bridge Venture Partners V-A, L.P., North Bridge Venture Partners V-B, L.P. and North Bridge Venture Partners IV, L.P.

"Perceptive" means, collectively, Perceptive Life Sciences Master Fund, Ltd. and Perceptive LS (A), LLC.

"Person" means an individual, corporation, partnership, limited liability company, trust, business trust, association, joint stock company, joint venture, sole proprietorship, unincorporated organization, governmental authority or any other form of entity not specifically listed herein.

"Placement Agent" means MTS Securities, LLC.

"Press Release" has the meaning set forth in Section 9.7.

"Registration Rights Agreement" has the meaning set forth in the Recitals.

"Required Investors" means the holders of a majority of the RRA Covered Shares and IRA Covered Shares, voting together as a single class, for so long as such shares remain "Registrable Securities" under the Registration Rights Agreement or "Registrable Shares" under the Investor Rights Agreement, respectively.

"SEC Filings" has the meaning set forth in Section 4.

"Securities" has the meaning set forth in the recitals.

"Selling Stockholder Questionnaire" has the meaning set forth in Section 3.1.

"Share Subscription Amount" means, as to a Share Investor, the aggregate amount to be paid for the Shares purchased hereunder as specified opposite such Investor's name on Exhibit A attached hereto, under the column entitled "Aggregate Purchase Price of Shares," in U.S. Dollars and in immediately available funds.

"Shares" has the meaning set forth in the Recitals.

"Short Sales" means all "short sales" as defined in Rule 200 of Regulation SHO under the 1934 Act (but shall not be deemed to include the location and/or reservation of borrowable shares of Common Stock).

"Subsidiaries" has the meaning set forth in Section 4.1.

"Trading Day" means a day on which Nasdaq is open for trading.

"Transaction Documents" means this Agreement and the Registration Rights Agreement.

"Transfer Agent" has the meaning set forth in Section 7.5.

"Warrant Subscription Amount" means, as to an Investor, the aggregate amount to be paid for the Warrants purchased hereunder as specified opposite such Investor's name on Exhibit B attached hereto, under the column entitled "Aggregate Purchase Price of Warrants," in U.S. Dollars and in immediately available funds.

"Warrants" has the meaning set forth in the recitals.

"Warrant Shares" means shares of Common Stock issuable upon exercise of the Warrants.

"1933 Act" has the meaning set forth in the Recitals.

"1934 Act" means the Securities Exchange Act of 1934, as amended, or any successor statute, and the rules and regulations promulgated thereunder.

2. Purchase and Sale of the Securities. On the Closing Date, upon the terms and subject to the conditions set forth herein, (i) the Company will issue and sell to the Share Investors, and the Share Investors will purchase, severally and not jointly, the number of shares of Common Stock set forth opposite the name of such Investor under the heading "Number of Shares to be Purchased" on Exhibit A attached hereto (the "Schedule of Share Investors") in exchange for consideration equal to $4.22 per Share and (ii) the Company will issue and sell to the Warrant Investors, and the Warrant Investors will purchase, severally and not jointly, Warrants to purchase such number of shares of Common Stock as set forth opposite the name of such Warrant Investor under the heading "Number of Shares Underlying Warrants to be Purchased" on Exhibit B attached hereto (the "Schedule of Warrant Investors"), each with an exercise price of $0.001 per Warrant Share, for consideration equating to $4.219 per Warrant to purchase one Warrant Share.

3. Closing.

3.1. Upon the satisfaction or waiver of the conditions set forth in Section 6, the closing of the purchase and sale of the Securities pursuant to this Agreement (the "Closing") shall be held no later than 10:00 AM (Eastern Time) on April 12, 2022 at the offices of Latham & Watkins LLP, 200 Clarendon Street, Boston, Massachusetts 02116, or on such other date and place as may be agreed to by the Company and the Investors (the "Closing Date"). At or prior to the Closing, each Investor shall execute any related agreements or other documents required to be executed hereunder, dated on or before the Closing Date, including but not limited to the Investor Questionnaire and (solely for the holders of RRA Covered Shares) the Selling Stockholder Notice and Questionnaire, in the forms attached hereto as Appendix I and Appendix II (the "Investor Questionnaire" and the "Selling Stockholder Questionnaire," respectively) (or similar forms reasonably satisfactory to the Company and sufficient in substance for the Company to obtain the information necessary to effect the transactions contemplated by the Transaction Documents).

3.2. On the Closing Date, (i) each Share Investor shall deliver or cause to be delivered to the Company the Share Subscription Amount and (ii) each Warrant Investor shall deliver or cause to be delivered to the Company the Warrant Subscription Amount, in each case, via wire transfer of immediately available funds pursuant to the wire instructions delivered to such Investor by the Company reasonably in advance of the Closing Date.

3.3. At or before the Closing, the Company shall deliver or cause to be delivered to each Investor:

(a) if such Investor is a Share Investor, a number of Shares, registered in the name of the Investor (or its nominee in accordance with its delivery instructions), in the amount set forth opposite the name of such Investor under the heading "Number of Shares to be Purchased" in the Schedule of Share Investors, with such Shares to be issued in book entry form or, upon request of an Investor, certificated form;

(b) if such Investor is a Warrant Investor, a Warrant, registered in the name of the Investor, to purchase a number of Warrant Shares in the amount set forth opposite the name of such Investor under the heading "Number of Shares Underlying Warrants to be Purchased" in the Schedule of Warrant Investors, with such Warrants to be issued in definitive form;

(c) a legal opinion of Latham & Watkins LLP, in a form reasonably acceptable to the Investors, dated as of the Closing Date, executed by such counsel and delivered to the Investors;

(d) for each Investor purchasing RRA Covered Shares hereunder, the Registration Rights Agreement, in the form of Exhibit D, executed by a duly authorized officer of the Company; and

(e) for each Investor purchasing IRA Covered Shares hereunder, the Investor Rights Agreement and the Investor Rights Agreement Waiver, in each case, executed by a duly authorized officer of the Company.

4. Representations and Warranties of the Company. The Company hereby represents and warrants to the Investors that, except as otherwise described in the Company's filings pursuant to the 1934 Act (collectively, the "SEC Filings"), which qualify these representations and warranties in their entirety, as of the date hereof:

4.1. Organization, Good Standing and Qualification. The Company is an entity duly incorporated, validly existing and in good standing under the laws of the State of Delaware, with the requisite corporate power and authority to own or lease and use its properties and assets, to execute and deliver the Transaction Documents, to carry out the provisions of the Transaction Documents, to issue and sell the Securities and to carry on its business as presently conducted as described in the SEC Filings. Each of the Company's subsidiaries required to be disclosed pursuant to Item 601(b)(21) of Regulation S-K in an exhibit to its Annual Report on Form 10-K filed with the SEC for the year ended December 31, 2021 (each, a "Subsidiary") is an entity duly incorporated or otherwise organized, validly existing and in good standing (to the extent such concept exists in the relevant jurisdiction) under the laws of the jurisdiction of its incorporation or organization, as applicable, and has all requisite power and authority to carry on its business to own and use its properties. Neither the Company nor its Subsidiary is in violation or default in any material respect of any of the provisions of its respective articles of association, charter, certificate of incorporation, bylaws, limited partnership agreement or other organizational or constitutive documents. Each of the Company and its Subsidiary is duly qualified to do business as a foreign entity and is in good standing (to the extent such concept exists in the relevant jurisdiction) in each jurisdiction in which the conduct of its business or its ownership or leasing of property makes such qualification necessary, except to the extent any failure to so qualify has not had and would not have a Material Adverse Effect.

4.2. Authorization. The Company has the requisite corporate power and authority and has taken all requisite corporate action necessary for, and no further action on the part of the Company, its officers, directors and stockholders is necessary for, (i) the authorization, execution and delivery of the Transaction Documents, (ii) the authorization of the performance of all obligations of the Company hereunder or thereunder, and (iii) the authorization, issuance and delivery of the Shares, the Warrants and the Warrant Shares. Each of the Transaction Documents has been duly authorized, executed and delivered by the Company and, assuming due authorization, execution and delivery by the Investors, constitutes a valid and binding obligation of the Company enforceable in accordance with its terms, except (a) as limited by applicable bankruptcy, insolvency, reorganization, moratorium or other laws of general application affecting enforcement of creditors' rights, (b) general principles of equity that restrict the availability of equitable remedies and (c) to the extent that the enforceability of indemnification provisions may be limited by applicable laws.

4.3. Capitalization. As of December 31, 2021, the capitalization of the Company was in all material respects as set forth in the Company's Annual Report on Form 10-K filed with the SEC for the year ended December 31, 2021. Since December 31, 2021, the Company has not issued any capital stock, other than pursuant to the exercise of warrants outstanding as of such date or the exercise of employee stock options or settlement of restricted stock units under the Company's equity incentive plans. 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 with applicable state and federal securities law and any rights of third parties. No Person is entitled to pre-emptive or similar statutory or contractual rights with respect to the issuance by the Company of any securities of the Company, including without limitation, the Shares. 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, except as contemplated by this Agreement. Except for the Registration Rights Agreement and the Investor Rights 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. Except as provided in the Registration Rights Agreement or the Investor Rights Agreement, no Person has the right to require the Company to register any securities of the Company under the 1933 Act, whether on a demand basis or in connection with the registration of securities of the Company for its own account or for the account of any other Person. Other than the anti-dilutive option required to be granted to Harlan Waksal, M.D. pursuant to that certain Employment Agreement, dated as of February 16, 2022, by and between the Company and Dr. Waksal (as described in the Company's Current Report on Form 8-K filed with the SEC on February 18, 2022), neither issuance and sale of the Securities hereunder nor the issuance of the Warrant Shares upon exercise of the Warrants will obligate the Company to issue shares of Common Stock or other securities to any other Person (other than the Investors) or will result in the adjustment of the exercise, conversion, exchange or reset price of any outstanding security. The Company does not have outstanding stockholder purchase rights or "poison pill" or any similar arrangement in effect giving any Person the right to purchase any equity interest in the Company upon the occurrence of certain events.

4.4. Valid Issuance. The Shares have been duly and validly authorized and, when issued and paid for pursuant to this Agreement, will be validly issued, fully paid and nonassessable, and shall be free and clear of all encumbrances and restrictions (other than those created by the Investors), except for restrictions on transfer set forth in the Transaction Documents or imposed by applicable securities laws. The Warrants have been duly and validly authorized and, when issued and paid for pursuant to this Agreement, will be validly issued. The Warrant Shares have been duly and validly authorized and reserved for issuance and, upon exercise of the Warrants in accordance with their terms, including the payment of any exercise price therefor, will be validly issued, fully paid and nonassessable and will be free and clear of all encumbrances and restrictions (other than those created by the Investors), except for restrictions on transfer set forth in the Transaction Documents or imposed by applicable securities laws.

4.5. Consents. The execution, delivery and performance by the Company of the Transaction Documents and the offer, issuance and sale of the Securities require no consent of, action by or in respect of, or filing with, any Person, governmental body, agency, or official other than filings that have been made pursuant to applicable state securities laws and the rules and regulations of Nasdaq and post-sale filings pursuant to applicable state and federal securities laws, which the Company undertakes to file within the applicable time periods, and other than the registration statement required to be filed by the Registration Rights Agreement. The Company has taken all action necessary to exempt (i) the issuance and sale of the Shares and (ii) the other transactions contemplated by the Transaction Documents from the provisions of any stockholder rights plan or other "poison pill" arrangement, any anti-takeover, business combination or control share law or statute binding on the Company or to which the Company or any of its assets and

properties is subject that is or could reasonably be expected to become applicable to the Investors as a result of the transactions contemplated hereby, including without limitation, the issuance of the Shares and the ownership, disposition or voting of the Shares by the Investors or the exercise of any right granted to the Investors pursuant to this Agreement or the other Transaction Documents.

4.6. Delivery of SEC Filings. True and complete copies of the SEC Filings have been made available by the Company to the Investors through the Electronic Data Gathering, Analysis, and Retrieval system (the "EDGAR System") (other than any information for which the Company has received confidential treatment from the SEC).

4.7. No Material Adverse Change. Since December 31, 2021, except as specifically set forth in a subsequent SEC Filing, there has not been:

(i) any change in the assets, liabilities, financial condition or operating results of the Company from that reflected in the financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2021, except for changes in the ordinary course of business which have not had and would not have a Material Adverse Effect;

(ii) any declaration or payment by the Company of any dividend, or any authorization or payment by the Company of any distribution, on any of the capital stock of the Company, or any redemption or repurchase by the Company of any securities of the Company;

(iii) any material damage, destruction or loss, whether or not covered by insurance, to any assets or properties of the Company;

(iv) any waiver, not in the ordinary course of business, by the Company of a material right or of a material debt owed to it;

(v) any satisfaction or discharge of a material lien, claim or encumbrance or payment of any obligation by the Company, except in the ordinary course of business;

(vi) any change or amendment to the Company's Certificate of Incorporation or Bylaws, or termination of or material amendment to any contract of the Company that the Company is or was required to file with the SEC pursuant to Item 601(b)(10) of Regulation S-K;

(vii) any material labor difficulties or, to the Company's Knowledge, labor union organizing activities with respect to employees of the Company;

(viii) any material transaction entered into by the Company other than in the ordinary course of business;

(ix) the loss of the services of any executive officer (as defined in Rule 405 under the 1933 Act) of the Company; or

(x) any other event or condition that has had or would have a Material Adverse Effect.

4.8. SEC Filings. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company under 1933 Act and the 1934 Act, including pursuant to Section 13(a) or 15(d) thereof, for the one year preceding the date hereof. At the time of filing thereof, such SEC Filings complied as to form in all material respects with the requirements of the 1933 Act or 1934 Act, as applicable, and, as of their respective dates, did not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading.

4.9. No Conflict, Breach, Violation or Default. The execution, delivery and performance of the Transaction Documents by the Company and the issuance and sale of the Securities in accordance with the provisions thereof and the issuance of the Warrant Shares upon exercise of the Warrants will not (i) conflict with or result in a breach or violation of (a) any of the terms and provisions of, or constitute a default under, the Company's Certificate of Incorporation or Bylaws, both as in effect on the date hereof (true and complete copies of which have been made available to the Investors through the EDGAR System), or (b) any applicable statute, rule, regulation or order of any governmental agency or body or any court, domestic or foreign, having jurisdiction over the Company or its Subsidiary, or any of their assets or properties, or (ii) conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, result in the creation of any lien, encumbrance or other adverse claim upon any of the properties or assets of the Company or its Subsidiary or give to others any rights of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) of, any Material Contract except, in the case of clauses (i)(b) and (ii) only, for such conflicts, breaches, violations and defaults as have not and would not have a Material Adverse Effect. This Section 4.9 does not relate to matters with respect to tax status, which are the subject of Section 4.11, intellectual property, which are the subject of Section 4.15, and environmental laws, which are the subject of Section 4.16.

4.10. Compliance. The Company is not (i) in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company under), nor has the Company received notice of a claim that it is in default under or that it is in violation of, any Material Contract (whether or not such default or violation has been waived), (ii) in violation of any judgment, decree or order of any court, arbitrator or governmental body or (iii) in violation of any statute, rule, ordinance or regulation of any governmental authority, including without limitation all foreign, federal, state and local laws relating to taxes, environmental protection, occupational health and safety, product quality and safety and employment and labor matters, except in each case as would not have or result in a Material Adverse Effect.

4.11. Tax Matters. The Company and its Subsidiary have timely filed all tax returns required to have been filed by the Company or its Subsidiary with all appropriate governmental agencies and have paid all taxes shown thereon or otherwise owed by them (whether or not shown on any tax returns). The Company and its Subsidiary have collected or withheld all material taxes required to be collected or withheld by applicable laws from employee, shareholders

or other third parties and have timely paid and have timely paid over such withheld amount to the appropriate government agency. The Company has made adequate charges, accruals and reserves in the applicable financial statements referred to in Section 4.18 below in respect of all federal, state and local and non-United States income and franchise taxes for all periods as to which the tax liability of the Company or its Subsidiary has not been finally determined, except to the extent of any inadequacy that would not result in a Material Adverse Effect. There are no material tax liens on any assets or property of the Company or its Subsidiary, and there are no material tax claims pending or, to the Company's Knowledge, threatened against the Company or its Subsidiary or any of their respective material assets or property.

4.12. Title to Properties. The Company and its Subsidiary have good and marketable title to all real properties and all other tangible properties and assets owned by them, in each case free from liens, encumbrances and defects, except such as would not have a Material Adverse Effect; and the Company and its Subsidiary hold any leased real or personal property under valid, subsisting and enforceable leases with which the Company are in compliance and with no exceptions, except such as would not have a Material Adverse Effect.

4.13. Certificates, Authorities and Permits. The Company and its Subsidiary possess adequate certificates, authorities or permits issued by appropriate governmental agencies or bodies necessary to conduct the business now operated by them, except where failure to so possess would not result in a Material Adverse Effect. Neither the Company nor its Subsidiary has received any notice of proceedings relating to the revocation or modification of any such certificate, authority or permit that, if determined adversely to the Company or its Subsidiary, would have a Material Adverse Effect.

4.14. Labor Matters.

(a) Neither the Company nor its Subsidiary is party to or bound by any collective bargaining agreement or other contract with any labor union or other labor organization, and no employees of the Company or its Subsidiary are represented by any labor union or other labor organization with respect to their employment.

(b) There are, and for the past three (3) years there have been, no actual or, to the Company's Knowledge, threatened union organizing activities, unfair labor practice charges, material labor grievances, material labor arbitrations, strikes, lockouts, work stoppages, slowdowns, picketing, hand billing or other material labor disputes against or affecting the Company or its Subsidiary.

(c) The Company and its Subsidiary are, and for the last three (3) years have been, in compliance in all material respects with all applicable laws respecting labor, employment and employment practices.

(d) The Company and its Subsidiary have promptly, thoroughly and impartially investigated all sexual harassment, or other discrimination, retaliation or policy violation allegations of which any of them is aware. With respect to each such allegation with potential merit, the Company or its Subsidiary has taken prompt corrective action that is reasonably calculated to prevent further improper action.

4.15. Intellectual Property. The Company and its Subsidiary own, possess, license or have other rights to use the Intellectual Property necessary or material for use in connection with its businesses as currently conducted or currently proposed to be conducted, in each case, as described in the SEC Filings (collectively, the "Intellectual Property Rights"). There is no pending or, to the Company's Knowledge, threatened action, suit, proceeding or claim by any Person that the Company's business or the business of its Subsidiary as now conducted infringes or otherwise violates any patent, trademark, copyright, trade secret or other proprietary rights of another or that challenges the validity or scope of any of the Intellectual Property Rights, including interferences, oppositions, reexaminations or government proceedings. To the Company's Knowledge, there is no material infringement by another Person of any of the Intellectual Property Rights. The Company and its Subsidiary have taken reasonable security measures to protect the secrecy, confidentiality and value of all of its Intellectual Property Rights. Each employee and consultant that has developed, conceived or reduced to practice any material Intellectual Property Rights has assigned to the Company or one of its Subsidiaries all such Intellectual Property Rights. All licenses or other material agreements under which the Company is granted rights to Intellectual Property are in full force and effect and, to the Company's Knowledge, there is no material default by any other party thereto. The Company has no reason to believe that the licensors under such licenses and other agreements do not have and did not have all requisite power and authority to grant the rights to the Intellectual Property purported to be granted thereby. None of the Intellectual Property Rights have not been adjudged by a court of competent jurisdiction invalid or unenforceable, in whole or in part. There are no liens, security interests or other encumbrances on the Intellectual Property Rights. To the Company's Knowledge, each founder and key employee of the Company and each Company employee involved with the development of Intellectual Property Rights has entered into an invention assignment agreement with the Company. The consummation of the transactions contemplated hereby and by the other Transaction Documents will not result in the alteration, loss, impairment of or restriction on the Company's or its Subsidiary's ownership or right to use any Intellectual Property that is material to the conduct of the Company's business as currently conducted or currently proposed to be conducted.

4.16. Environmental Matters. Except as would not have a Material Adverse Effect, neither the Company nor its Subsidiary is in violation of any statute, rule, regulation, decision or order of any governmental agency or body or any court, domestic or foreign, relating to the use, disposal or release of hazardous or toxic substances or relating to the protection or restoration of the environment or human exposure to hazardous or toxic substances (collectively, "Environmental Laws"), has released any hazardous substances regulated by Environmental Law on to any real property that it owns or operates, or has received any written notice or claim it is liable for any off-site disposal or contamination pursuant to any Environmental Laws; and to the Company's Knowledge, there is no pending or threatened investigation that would reasonably be expected to lead to such a claim.

4.17. Legal Proceedings. There are no legal, governmental or regulatory investigations, actions, suits, charges, claims, complaints, audits, inquiries or proceedings pending or, to the Company's Knowledge, threatened to which the Company or its Subsidiary is or may reasonably be expected to become a party or to which any property of the Company is or may reasonably be expected to become the subject that, individually or in the aggregate, if determined adversely to the Company or its Subsidiary, would have a Material Adverse Effect. The SEC has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company or its Subsidiary under the 1933 Act or the 1934 Act.

4.18. Financial Statements. The financial statements included in each SEC Filing comply in all material respects with applicable accounting requirements and the rules and regulations of the SEC with respect thereto as in effect at the time of filing (or to the extent corrected by a subsequent restatement) and present fairly, in all material respects, the financial position of the Company as of the dates shown and its results of operations and cash flows for the periods shown, subject in the case of unaudited financial statements to normal, immaterial year-end audit adjustments, and such financial statements have been prepared in conformity with United States generally accepted accounting principles applied on a consistent basis during the periods involved ("GAAP") (except as may be disclosed therein or in the notes thereto, and except that the unaudited financial statements may not contain all footnotes required by GAAP, and, in the case of quarterly financial statements, as permitted by Form 10-Q under the 1934 Act). Except as set forth in the financial statements of the Company included in the SEC Filings filed prior to the date hereof, the Company has not incurred any liabilities, contingent or otherwise, except those incurred in the ordinary course of business, consistent (as to amount and nature) with past practices since the date of such financial statements, none of which, individually or in the aggregate, have had or would have a Material Adverse Effect.

4.19. Compliance with Nasdaq Continued Listing Requirements. The Company is in compliance with applicable Nasdaq continued listing requirements. There are no proceedings pending or, to the Company's Knowledge, threatened against the Company relating to the continued listing of the Common Stock on Nasdaq and the Company has not received any notice of, nor to the Company's Knowledge is there any reasonable basis for, the delisting of the Common Stock from Nasdaq.

4.20. Brokers and Finders. Other than the Placement Agent, no Person will have, as a result of the transactions contemplated by the Transaction Documents, any valid right, interest or claim against or upon the Company or, to the Company's Knowledge, an Investor for any commission, fee or other compensation pursuant to any agreement, arrangement or understanding entered into by or on behalf of the Company.

4.21. No Directed Selling Efforts or General Solicitation. Neither the Company nor its Subsidiary nor any Person acting on its behalf has conducted any general solicitation or general advertising (as those terms are used in Regulation D) in connection with the offer or sale of any of the Securities.

4.22. No Integrated Offering. Neither the Company nor its Subsidiary nor any Person acting on its behalf has, directly or indirectly, made any offers or sales of any Company security or solicited any offers to buy any Company security, under circumstances that would adversely affect reliance by the Company on Section 4(a)(2) for the exemption from registration for the transactions contemplated hereby or would require registration of the Securities under the 1933 Act.

4.23. Private Placement. The offer and sale of the Securities to the Investors as contemplated hereby is exempt from the registration requirements of the 1933 Act.

4.24. Questionable Payments**.** Neither the Company nor its Subsidiary nor, to the Company's Knowledge, any of the current or former directors, officers, employees, agents or other Persons acting on behalf of the Company or its Subsidiary, has on behalf of the Company or its Subsidiary: (a) used any corporate funds for unlawful contributions, gifts, entertainment or other unlawful expenses relating to political activity; (b) made any direct or indirect unlawful payments to any governmental officials or employees from corporate funds; (c) established or maintained any unlawful or unrecorded fund of corporate monies or other assets which is in violation of law; (d) made any false or fictitious entries on the books and records of the Company; (e) made any unlawful rebate, payoff, influence payment, kickback, bribe or other unlawful payment of any nature; or (f) violated or is in violation of any provision of the Foreign Corrupt Practices Act of 1977, as amended.

4.25. Office of Foreign Assets Control. Neither the Company nor its Subsidiary nor, to the Company's Knowledge, any of the current or former directors, officers, employees, agents or other Persons acting on behalf of the Company or its Subsidiary is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department.

4.26. Transactions with Affiliates. Except as disclosed in the SEC Filings, none of the officers or directors of the Company and, to the Company's Knowledge, none of the employees of the Company is presently a party to any transaction with the Company or its Subsidiary (other than as holders of stock options and/or warrants, and for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, or otherwise requiring payments to or from any officer, director or such employee or, to the Company's Knowledge, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee or partner.

4.27. Internal Controls. The Company is in compliance in all material respects with the provisions of the Sarbanes-Oxley Act of 2002 currently applicable to the Company. The Company and its Subsidiary maintain a system of internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets and liabilities is compared with the existing assets and liabilities at reasonable intervals and appropriate action is taken with respect to any differences. The Company has established and maintains disclosure controls and procedures (as defined in 1934 Act Rules 13a-15(e) and 15d-15(e)) for the Company and designed such disclosure controls and procedures to ensure that material information relating to the Company, including its Subsidiary, is made known to the certifying officers by others within those entities, particularly during the period in which the Company's most recently filed periodic report under the 1934 Act, as the case may be, is being prepared. The Company has established internal control over financial reporting (as defined in 1934 Act Rules 13a-15(f) and 15d-15(f)) to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. The Company's certifying officers have evaluated the effectiveness of the Company's disclosure controls and procedures and the Company's internal

control over financial reporting (collectively, "internal controls") as of the end of the period covered by the most recently filed periodic report under the 1934 Act (such date, the "Evaluation Date"). The Company presented in its most recently filed periodic report under the 1934 Act the conclusions of the certifying officers about the effectiveness of such internal controls based on their evaluations as of the Evaluation Date. Since the Evaluation Date, there have been no significant changes in the Company's internal controls or, to the Company's Knowledge, in other factors that could significantly affect the Company's internal controls. The Company maintains and will continue to maintain a standard system of accounting established and administered in accordance with GAAP and the applicable requirements of the 1934 Act.

4.28. Investment Company. The Company is not required to be registered as, and is not an Affiliate of, and immediately following the Closing will not be required to register as, an "investment company" within the meaning of the Investment Company Act of 1940, as amended.

4.29. Preclinical Studies and Clinical Trials. The preclinical studies and clinical trials conducted by, on behalf of, or sponsored by the Company or its Subsidiary that are described in, or the results of which are referred to in, the SEC Filings were and, if still pending, are being, conducted in all material respects in accordance with the protocols submitted to the U.S. Food and Drug Administration (the "FDA") or any foreign governmental body exercising comparable authority (together with the FDA, the "Regulatory Authorities"), any conditions of approval and policies imposed by any institutional review board, ethics review board or committee responsible for the oversight of such preclinical studies and clinical trials, standard medical and scientific research standards and procedures for products or product candidates comparable to those being developed by the Company and all applicable statutes and all applicable rules and regulations enforced by the FDA or other Regulatory Authorities and applicable Good Clinical Practice and Good Laboratory Practice requirements; the descriptions of the preclinical studies and clinical trials conducted by or, to the Company's Knowledge, on behalf of the Company or its Subsidiary, contained in the SEC Filings are accurate and not misleading in all material respects; the Company has no Knowledge of any other preclinical studies and clinical trials, the results of which are inconsistent with or would call into question the results described in the SEC Filings; and neither the Company nor its Subsidiary have received any written notices or correspondence from any Regulatory Authorities or any Institutional Review Board requiring or threatening the termination, suspension, material modification or clinical hold of any preclinical studies or clinical trials conducted by or on behalf of the Company and, to the Company's Knowledge, there are no reasonable grounds for the same.

4.30. Manipulation of Price. The Company has not, and, to the Company's Knowledge, no Person acting on its behalf has taken, directly or indirectly, any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Securities.

4.31. Bad Actor Disqualification. None of the Company, any predecessor or affiliated issuer of the Company nor, to the Company's Knowledge, any director or executive officer of the Company or any promoter connected with the Company in any capacity, is subject to any of the "bad actor" disqualifications within the meaning of Rule 506(d) under the 1933 Act, except for a disqualification event covered by Rule 506(d)(2) or (d)(3).

4.32. Shell Company Status. The Company is not, and has never been, an issuer identified in Rule 144(i)(1).

4.33. Disclosure. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, the Company confirms that neither it nor any other Person acting on its behalf has provided any of the Investors with any information that it believes constitutes material, non-public information that will not otherwise be disclosed in the SEC Filings on or prior to the Closing Date. The Company understands and confirms that the Investors will rely on the foregoing representation in effecting transactions in securities of the Company.

4.34. Insurance Coverage. The Company maintains in full force and effect insurance coverage that is customary for comparably situated companies for the business being conducted and properties owned or leased by the Company, and the Company reasonably believes such insurance coverage to be adequate against all liabilities, claims and risks against which it is customary for comparably situated companies to insure.

4.35. Anti-Bribery and Anti-Money Laundering Laws. Each of the Company, its Subsidiary and any of their respective officers, directors, supervisors, managers, agents, or employees are and have at all times been in compliance with and its participation in the offering will not violate: (A) anti-bribery laws, including but not limited to, any applicable law, rule, or regulation of any locality, including but not limited to any law, rule, or regulation promulgated to implement the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, signed December 17, 1997, including the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.K. Bribery Act 2010, or any other law, rule or regulation of similar purposes and scope or (B) anti-money laundering laws, including, but not limited to, applicable federal, state, international, foreign or other laws, regulations or government guidance regarding anti-money laundering, including, without limitation, Title 18 US. Code sections 1956 and 1957, the Patriot Act, the Bank Secrecy Act, and international anti-money laundering principles or procedures by an intergovernmental group or organization, such as the Financial Action Task Force on Money Laundering, of which the United States is a member and with which designation the United States representative to the group or organization continues to concur, all as amended, and any Executive order, directive, or regulation pursuant to the authority of any of the foregoing, or any orders or licenses issued thereunder.

4.36. No Additional Agreements. The Company has no other agreements or understandings (including, without limitation, side letters) with any Investor to purchase Securities on terms more favorable to such Investor than as set forth herein.

5. Representations and Warranties of the Investors. Each of the Investors hereby, severally and not jointly, represents and warrants to the Company that:

5.1. Organization and Existence. Such Investor is a validly existing corporation, limited partnership or limited liability company and has all requisite corporate, partnership or limited liability company power and authority to enter into and consummate the transactions contemplated by the Transaction Documents and to carry out its obligations hereunder and thereunder, and to invest in the Shares or the Warrants, as applicable, pursuant to this Agreement.

5.2. Authorization. The execution, delivery and performance by such Investor of the Transaction Documents to which such Investor is a party have been duly authorized and each has been duly executed and when delivered will constitute the valid and legally binding obligation of such Investor, enforceable against such Investor in accordance with their respective terms, except: (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

5.3. Purchase Entirely for Own Account. The Shares, the Warrants and/or the Warrant Shares, as applicable, to be received by such Investor hereunder will be acquired for such Investor's own account, not as nominee or agent, and not with a view to the resale or distribution of any part thereof in violation of the 1933 Act, and such Investor has no present intention of selling, granting any participation in, or otherwise distributing the same in violation of the 1933 Act without prejudice, however, to such Investor's right at all times to sell or otherwise dispose of all or any part of such Shares, Warrants or Warrant Shares, as applicable, in compliance with applicable federal and state securities laws. Nothing contained herein shall be deemed a representation or warranty by Investor to hold the Shares, the Warrants and/or the Warrant Shares, as applicable, for any period of time. Such Investor is not a broker-dealer registered with the SEC under the 1934 Act or an entity engaged in a business that would require it to be so registered.

5.4. Investment Experience. Such Investor acknowledges that it can bear the economic risk and complete loss of its investment in the Shares, the Warrants and/or the Warrant Shares, as applicable, and has such knowledge and experience in financial or business matters that it is capable of evaluating the merits and risks of the investment contemplated hereby.

5.5. Disclosure of Information. Such Investor or its advisor has had an opportunity to receive, review and understand all information related to the Company requested by it and to ask questions of and receive answers from the Company regarding the Company, its business and the terms and conditions of the offering of the Securities, and has conducted and completed its own independent due diligence. Such Investor acknowledges receipt of copies of the SEC Filings that are available on the Edgar System. Based on the information such Investor or its advisor has deemed appropriate, and without reliance on the Placement Agent, it or its advisor has independently made its own analysis and decision to enter into the Transaction Documents. Such Investor or its advisor is relying exclusively on its own sources of information, investment analysis and due diligence (including professional advice it deems appropriate) with respect to the execution, delivery and performance of the Transaction Documents, the Shares, the Warrants and/or the Warrant Shares, as applicable, and the business, condition (financial and otherwise), management, operations, properties and prospects of the Company, including but not limited to all business, legal, regulatory, accounting, credit and tax matters. Neither such inquiries nor any other due diligence investigation conducted by such Investor or its advisor shall modify, limit or otherwise affect such Investor's right to rely on the Company's representations and warranties contained in this Agreement.

5.6. Restricted Securities. Such Investor understands that the Shares, the Warrants and/or the Warrant Shares, as applicable, are characterized as "restricted securities" under the U.S. federal securities laws inasmuch as they are being acquired from the Company in a transaction not involving a public offering and that under such laws and applicable regulations such securities may be resold without registration under the 1933 Act only in certain limited circumstances.

5.7. Legends. It is understood that, except as provided below, certificates evidencing the Shares, the Warrants and the Warrant Shares may bear the following or any similar legend:

> "THE SECURITIES REPRESENTED HEREBY HAVE NOT 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, AND, ACCORDINGLY, MAY NOT BE TRANSFERRED UNLESS (I) SUCH SECURITIES HAVE BEEN REGISTERED FOR SALE PURSUANT TO THE SECURITIES ACT OF 1933, AS AMENDED, (II) SUCH SECURITIES MAY BE SOLD PURSUANT TO RULE 144, OR (III) THE COMPANY HAS RECEIVED AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO IT THAT SUCH TRANSFER MAY LAWFULLY BE MADE WITHOUT REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED. NOTWITHSTANDING THE FOREGOING, THE SECURITIES MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN OR FINANCING ARRANGEMENT SECURED BY THE SECURITIES."

If required by the authorities of any state in connection with the issuance of sale of the Shares, the Warrants and/or the Warrant Shares, the legend required by such state authority.

5.8. Accredited Investor. At the time such Investor was offered the Shares or the Warrants, as applicable, it was and, as of the date hereof, such Investor is an "accredited investor" within the meaning of Rule 501 under the 1933 Act and has executed and delivered to the Company its Investor Questionnaire, which such Investor represents and warrants is true, correct and complete. Such investor is a sophisticated institutional investor with sufficient knowledge, sophistication and experience in business, including transactions involving private placements in public equity, to properly evaluate the risks and merits of its purchase of the Shares or the Warrants, as applicable. Such Investor has determined based on its own independent review and such professional advice as it deems appropriate that its purchase of the Shares or the Warrants, as applicable, and participation in the transactions contemplated by the Transaction Documents (i) are fully consistent with its financial needs, objectives and condition, and (ii) are a fit, proper and suitable investment for such Investor, notwithstanding the substantial risks inherent in investing in or holding the Shares or the Warrants, applicable.

5.9. Placement Agent. Such Investor hereby acknowledges and agrees that it has independently evaluated the merits of its decision to purchase the Shares or the Warrants, as applicable, and that (a) the Placement Agent is acting solely as placement agent in connection with the execution, delivery and performance of the Transaction Documents and is not acting as an underwriter or in any other capacity and is not and shall not be construed as a fiduciary for such Investor, the Company or any other person or entity in connection with the execution, delivery and performance of the Transaction Documents, (b) the Placement Agent has not made and will not make any representation or warranty, whether express or implied, of any kind or character nor has the Placement Agent provided any advice or recommendation in connection with the execution, delivery and performance of the Transaction Documents, (c) the Placement Agent will not have any responsibility with respect to (i) any representations, warranties or agreements made by any person or entity under or in connection with the execution, delivery and performance of the Transaction Documents, or the execution, legality, validity or enforceability (with respect to any person) thereof, or (ii) the business, affairs, financial condition, operations, properties or prospects of, or any other matter concerning the Company and (d) Investor hereby waives any claims that it otherwise might assert against the Placement Agent in respect of the transactions contemplated by the Transaction Documents.

5.10. No General Solicitation. Such Investor did not learn of the investment in the Shares or the Warrants, as applicable, as a result of any general solicitation or general advertising.

5.11. Brokers and Finders. No Person will have, as a result of the transactions contemplated by the Transaction Documents, any valid right, interest or claim against or upon the Company or an Investor for any commission, fee or other compensation pursuant to any agreement, arrangement or understanding entered into by or on behalf of such Investor.

5.12. Short Sales and Confidentiality Prior to the Date Hereof. Other than consummating the transactions contemplated hereunder, such Investor has not, nor has any Person acting on behalf of or pursuant to any understanding with such Investor, directly or indirectly executed any purchases or sales, including Short Sales, of the securities of the Company during the period commencing as of the time that such Investor was first contacted by the Company, the Placement Agent or any other Person regarding the transactions contemplated hereby and ending immediately prior to the date hereof. Notwithstanding the foregoing, in the case of an Investor that is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of such Investor's assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of such Investor's assets, the representation set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Securities covered by this Agreement. The Investor, its Affiliates and authorized representatives and advisors who are aware of the transactions contemplated hereby, maintained the confidentiality of all disclosures made to it in connection with this transaction (including the existence and terms of this transaction). Notwithstanding the foregoing, for avoidance of doubt, nothing contained herein shall constitute a representation or warranty, or preclude any actions, with respect to the identification of the availability of, or securing of, available shares to borrow in order to effect Short Sales or similar transactions in the future.

5.13. No Government Recommendation or Approval. Such Investor understands that no United States federal or state agency, or similar agency of any other country, has reviewed, approved, passed upon, or made any recommendation or endorsement of the Company or the purchase of the Securities.

5.14. No Intent to Effect a Change of Control; Ownership. Such Investor has no present intent to effect a "change of control" of the Company as such term is understood under the rules promulgated pursuant to Section 13(d) of the 1934 Act and under the rules of Nasdaq. As to each Investor purchasing RRA Covered Shares, except as set forth in its Selling Stockholder Questionnaire, as of the date hereof, neither such Investor nor any of its Affiliates is the owner of record or the beneficial owner of shares of Common Stock or securities convertible into or exchangeable for Common Stock.

5.15. No Conflicts. The execution, delivery and performance by such Investor of the Transaction Documents and the consummation by such Investor of the transactions contemplated hereby and thereby will not (i) result in a violation of the organizational documents of such Investor or (ii) conflict with, or constitute a default (or an event which with notice or lapse of time or both would become a default) under, or give to others any rights of termination, amendment, acceleration or cancellation of, any agreement, indenture or instrument to which such Investor is a party, or (iii) result in a violation of any law, rule, regulation, order, judgment or decree (including federal and state securities laws) applicable to such Investor, except in the case of clauses (ii) and (iii) above, for such conflicts, defaults, rights or violations which would not, individually or in the aggregate, reasonably be expected to have a material adverse effect on the ability of such Investor to perform its obligations hereunder.

5.16. No Rule 506 Disqualifying Activities. If such Investor is a Company Covered Person, such Investor has not taken any of the actions set forth in, and is not subject to, the disqualification provisions of Rule 506(d)(1) of the 1933 Act.

5.17. Residency. Such Investor is a resident of or an entity organized under the jurisdiction specified below its address on the Schedule of Investors.

The Company acknowledges and agrees that the representations contained in this Section 5 shall not modify, amend or affect such Investor's right to rely on the Company's representations and warranties contained in this Agreement or any representations and warranties contained in any other Transaction Document or any other document or instrument executed and/or delivered in connection with this Agreement or the consummation of the transactions contemplated hereby.

6. Conditions to Closing; Termination.

6.1. Conditions to the Investors' Obligations. The obligation of each Investor to purchase Securities at the Closing is subject to the fulfillment to such Investor's satisfaction, on or prior to the Closing Date, of the following conditions, any of which may be waived by such Investor (as to itself only):

(a) The representations and warranties made by the Company in Section 4 hereof shall be true and correct in all material respects as of the date hereof and on the Closing Date (other than any representations and warranties that are already qualified by materiality or Material Adverse Effect), except to the extent any such representation or warranty expressly speaks as of an earlier date, in which case such representation or warranty shall be true and correct as of such earlier date. The Company shall have performed in all material respects all obligations and covenants herein required to be performed by it on or prior to the Closing Date.

(b) The Company shall have obtained any and all consents, permits, approvals, registrations and waivers necessary for consummation of the purchase and sale of the Securities and the consummation of the other transactions contemplated by the Transaction Documents, including the waiver of any applicable registration rights that could affect the rights of the Investors under the Registration Rights Agreement, all of which shall be in full force and effect.

(c) The Company shall have executed and delivered the Registration Rights Agreement.

(d) Each of the Company, North Bridge and Perceptive shall have executed the Investor Rights Agreement and the Investor Rights Agreement Waiver.

(e) The Company shall have filed with Nasdaq a Listing of Additional Shares notification form for the listing of the Shares and the Warrant Shares, a copy of which shall have been made available to the Investors upon request, and is not aware of any circumstance that would cause the Shares to be not approved for listing.

(f) No judgment, writ, order, injunction, award or decree of or by any court, or judge, justice or magistrate, including any bankruptcy court or judge, or any order of or by any governmental authority, shall have been issued, and no action or proceeding shall have been instituted by any governmental authority, enjoining or preventing the consummation of the transactions contemplated hereby or in the other Transaction Documents.

(g) The Investors shall have received a legal opinion of Latham & Watkins LLP, in a form reasonably acceptable to the Investors, dated as of the Closing Date, executed by such counsel and delivered to the Investors;

(h) There shall have been no Material Adverse Effect with respect to the Company since the date hereof.

(i) No stop order or suspension of trading shall have been imposed by Nasdaq, the SEC or any other governmental or regulatory body with respect to public trading in the Common Stock.

6.2. Conditions to Obligations of the Company. The Company's obligation to sell and issue Securities at the Closing as to any Investor is subject to the fulfillment to the satisfaction of the Company on or prior to the Closing Date of the following conditions, any of which may be waived by the Company:

(a) The representations and warranties made by such Investor in Section 5 hereof shall be true and correct in all material respects when made, and shall be true and correct in all material respects on the Closing Date with the same force and effect as if they had been made on and as of said date. Such Investor shall have performed in all material respects all obligations and covenants herein required to be performed by it on or prior to the Closing Date.

(b) Such Investor shall have executed and delivered the Registration Rights Agreement (other than North Bridge and Perceptive), an Investor Questionnaire and a Selling Stockholder Questionnaire (other than North Bridge and Perceptive).

(c) Each of North Bridge and Perceptive shall have executed the Investor Rights Agreement and the Investor Rights Agreement Waiver.

(d) Such Share Investor shall have paid in full its Shares Subscription Amount to the Company.

(e) Such Warrant Investor shall have paid in full its Warrant Subscription Amount to the Company.

6.3. Termination of Obligations to Effect Closing; Effects.

(a) The obligations of the Company, on the one hand, and the Investors, on the other hand, to effect the Closing shall terminate as follows:

(i) Upon the mutual written consent of the Company and Investors that agreed to purchase a majority of the Securities to be issued and sold pursuant to this Agreement (which majority must include Perceptive);

(ii) By the Company if any of the conditions set forth in Section 6.2 shall have become incapable of fulfillment, and shall not have been waived by the Company; or

(iii) By an Investor (with respect to itself only) if any of the conditions set forth in Section 6.1 shall have become incapable of fulfillment, and shall not have been waived by the Investor;

provided, however, that, except in the case of clause (i) above, the party seeking to terminate its obligation to effect the Closing shall not then be in breach of any of its representations, warranties, covenants or agreements contained in this Agreement or the other Transaction Documents if such breach has resulted in the circumstances giving rise to such party's seeking to terminate its obligation to effect the Closing.

(b) In the event of termination by the Company or any Investor of its obligations to effect the Closing pursuant to this Section 6.3, written notice thereof shall be given to the other Investors by the Company and the other Investors shall have the right to terminate their obligations to effect the Closing upon written notice to the Company and the other Investors. Nothing in this Section 6.3 shall be deemed to release any party from any liability for any breach by such party of the terms and provisions of this Agreement or the other Transaction Documents or to impair the right of any party to compel specific performance by any other party of its obligations under this Agreement or the other Transaction Documents.

7. Covenants and Agreements of the Company.

7.1. Information. From the date hereof until the Closing, the Company will make reasonably available to the Investors' representatives, consultants and their respective counsels for inspection, such information and documents as the Investor reasonably requests, and will make available at reasonable times and to a reasonable extent officers and employees of the Company to discuss the business and affairs of the Company; provided, however, that in no event shall the Company be required to disclose material nonpublic information to the Investors, or to advisors to or representatives of the Investors.

7.2. Nasdaq Listing. The Company will use commercially reasonable efforts to continue the listing and trading of its Common Stock on Nasdaq and, in accordance therewith, will use commercially reasonable efforts to comply in all respects with the Company's reporting, filing and other obligations under the bylaws or rules of such market or exchange, as applicable.

7.3. Termination of Covenants. The provisions of Sections 7.1 and 7.2 shall terminate and be of no further force and effect (x) as to any Investor holding RRA Covered Shares, on the date on which the Company's obligations under the Registration Rights Agreement to register or maintain the effectiveness of any registration covering the Registrable Securities (as such term is defined in the Registration Rights Agreement) shall terminate and (y) as to any Investor holding IRA Covered Shares, on the date when such IRA Covered Shares no longer constitute "Registrable Shares" under the Investor Rights Agreement.

7.4. Form D. The Company agrees to timely file a Form D with respect to the Securities as required under Regulation D and to provide a copy thereof, promptly upon request of an Investor.

7.5. Removal of Legends. In connection with any sale, assignment, transfer or other disposition of the Shares or the Warrant Shares, as applicable, by an Investor pursuant to Rule 144, pursuant to any other exemption under the 1933 Act or pursuant to sale under an effective registration statement such that the purchaser acquires freely tradable shares and upon compliance by the Investor with the requirements of this Section 7.5, if requested by the Investor, the Company shall cause the transfer agent for the Common Stock (the "Transfer Agent") to timely remove any restrictive legends related to the book entry account holding such Shares or Warrant Shares, as applicable, and make a new, unlegended entry for such book entry Shares or Warrant Shares, as applicable, sold or disposed of without restrictive legends within two (2) Trading Days of any such request therefor from the Investor, provided that the Company has received customary representations and other documentation reasonably acceptable to the Company in connection therewith. Subject to receipt by the Company of customary representations and other documentation reasonably acceptable to the Company in connection therewith, upon the earlier of such time as the Shares or Warrant Shares, as applicable, (i) have been sold or transferred pursuant to an effective registration statement, (ii) have been sold pursuant to Rule 144, or (iii) are eligible for resale under Rule 144(b)(1) or any successor provision (without the requirement for the Company to comply with the current public information obligations of Rule 144(c)), the Company shall within two (2) Trading Days of any request therefor from an Investor accompanied by such customary and reasonably acceptable documentation referred to above (A) deliver to the Transfer Agent irrevocable instructions that

the Transfer Agent shall make a new, unlegended entry for such book entry Shares or Warrant Shares, as applicable, and (B) use reasonably best efforts to cause its counsel to deliver to the Transfer Agent one or more blanket opinions to the effect that the removal of such legends in such circumstances may be effected under the 1933 Act. From and after the earlier of such dates, upon an Investor's written request, the Company shall promptly cause certificates or book entries evidencing the Investor's Shares or Warrant Shares, as applicable, to be replaced with certificates or book entries, as the case may be, which do not bear such restrictive legends, provided the provisions of either clauses (i), (ii) or (iii) above, as applicable, are satisfied with respect to such Shares or Warrant Shares, as applicable. The Company shall be responsible for the fees of its Transfer Agent associated with such issuance.

7.6. Pledge of Securities. The Company acknowledges and agrees that its Shares or Warrant Shares, as applicable, may be pledged by an Investor in connection with a bona fide margin agreement or other loan or financing arrangement that is secured by the Shares or the Warrant Shares, as applicable. The pledge of Shares or Warrant Shares, as applicable, shall not be deemed to be a transfer, sale or assignment of the Shares hereunder, and no Investor effecting a pledge of Shares or Warrant Shares, as applicable, shall be required to provide the Company with any notice thereof or otherwise make any delivery to the Company pursuant to this Agreement or any other Transaction Document; provided that an Investor and its pledgee shall be required to comply with the provisions of the Transaction Documents, including Section 7.5 hereof, in order to effect a sale, transfer or assignment of Shares or Warrant Shares, as applicable, to such pledgee.

7.7. Short Sales and Confidentiality After the Date Hereof. Each Investor covenants that neither it nor any Affiliates acting on its behalf or pursuant to any understanding with it will execute any Short Sales during the period from the date hereof until the earlier of such time as (i) after the transactions contemplated by this Agreement are first publicly announced or (ii) this Agreement is terminated in full. Notwithstanding the foregoing, in the case of an Investor that is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of such Investor's assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of such Investor's assets, the covenant set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Shares. Each Investor covenants that until such time as the transactions contemplated by this Agreement are publicly disclosed by the Company, such Investor will maintain the confidentiality of all disclosures made to it in connection with this transaction (including the existence and terms of this transaction). Each Investor understands and acknowledges that the SEC currently takes the position that coverage of short sales of shares of the Common Stock "against the box" prior to effectiveness of a resale registration statement with securities included in such registration statement would be a violation of Section 5 of the 1933 Act, as set forth in Item 239.10 of the 1933 Act Rules Compliance and Disclosure Interpretations compiled by the Office of Chief Counsel, Division of Corporation Finance.

7.8. Adjustments in Share Numbers and Prices. In the event of any stock split, subdivision, dividend or distribution payable in shares of Common Stock (or other securities or rights convertible into, or entitling the holder thereof to receive directly or indirectly shares of Common Stock), combination or other similar recapitalization or event occurring after the date hereof and prior to the Closing, each reference in any Transaction Document to a number of shares or a price per share shall be deemed to be amended to appropriately account for such event.

7.9. Fees. The Company shall be responsible for the payment of any placement agent's fees, financial advisory fees, or broker's commissions (other than for Persons engaged by any Investor) relating to or arising out of the transactions contemplated hereby, including, without limitation, any fees or commissions payable to the Placement Agent.

8. Survival and Indemnification.

8.1. Survival. The representations, warranties, covenants, and agreements contained in this Agreement shall survive the Closing for a period of three hundred sixty five (365) days after the date hereof and thereafter shall have no further force and effect; provided that the terms of Section 7.5 shall survive beyond such period until such time as no Investor holds any Registrable Securities (as defined in the Registration Rights Agreement).

8.2. Indemnification by the Company. The Company agrees to indemnify and hold harmless each of the Investors, the officers, directors, partners, members, managers, trustees, employees and agents and other representatives, successors and assigns of each Investor, each Person who controls any such Investor (within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act) and the officers, directors, partners, members, managers, trustees and employees of each such controlling Person (each, an "Indemnified Party"), against any losses, claims, damages, liabilities or expenses, joint or several, to which such Indemnified Party may become subject under the 1933 Act, the 1934 Act, or any other federal or state statutory law or regulation (including in settlement of any litigation, if such settlement is effected with the written consent of the Company, provided that such consent shall not be unreasonably withheld), insofar as such losses, claims, damages, liabilities or expenses (or actions in respect thereof as contemplated below) arise out of or are based in whole or in part on the inaccuracy in the representations and warranties of the Company contained in this Agreement or the failure of the Company to perform its obligations hereunder, and will reimburse each Indemnified Party for legal and other expenses reasonably incurred as such expenses are reasonably incurred by such Indemnified Party in connection with investigating, defending, settling, compromising or paying such loss, claim, damage, liability, expense or action; provided, however, that the Company will not be liable in any such case to the extent that any such loss, claim, damage, liability or expense arises out of or is based upon (i) the failure of such Indemnified Party (or its related parties) to comply with the covenants and agreements contained herein, or (ii) the inaccuracy of any representations made by such Indemnified Party (or its related parties) herein.

8.3. Indemnification Procedure**.** Promptly after any Indemnified Party has received notice of any indemnifiable claim hereunder, or the commencement of any action, suit or proceeding by a third Person, which the Indemnified Party believes in good faith is an indemnifiable claim under this Agreement, the Indemnified Party shall give the Company written notice of such claim or the commencement of such action, suit or proceeding, but failure to so notify the Company will not relieve the Company from any liability it may have to such Indemnified Party hereunder except to the extent that the Company is materially prejudiced by such failure. Such notice shall state the nature and the basis of such claim to the extent then known. The Company shall have the right to defend and settle, at its own expense and by its own counsel

who shall be reasonably acceptable to the Indemnified Party, any such matter as long as the Company pursues the same diligently and in good faith. If the Company undertakes to defend or settle, it shall promptly notify the Indemnified Party of its intention to do so, and the Indemnified Party shall cooperate with the Company and its counsel in all commercially reasonable respects in the defense thereof and the settlement thereof. Such cooperation shall include, but shall not be limited to, furnishing the Company with any books, records and other information reasonably requested by the Company and in the Indemnified Party's possession or control. Such cooperation of the Indemnified Party shall be at the cost of the Company. After the Company has notified the Indemnified Party of its intention to undertake to defend or settle any such asserted liability, and for so long as the Company diligently pursues such defense, the Company shall not be liable for any additional legal expenses incurred by the Indemnified Party in connection with any defense or settlement of such asserted liability; provided, however, that the Indemnified Party shall be entitled (a) at its expense, to participate in the defense of such asserted liability and the negotiations of the settlement thereof and (b) if (i) the Company has failed to assume the defense or employ counsel reasonably acceptable to the Indemnified Party or (ii) if the defendants in any such action include both the Indemnified Party and the Company and counsel to the Indemnified Party shall have concluded that there may be reasonable defenses available to the Indemnified Party that are different from or in addition to those available to the Company or if the interests of the Indemnified Party reasonably may be deemed to conflict with the interests of the Company, then the Indemnified Party shall have the right to select a separate counsel and to assume such legal defense and otherwise to participate in the defense of such action, with the expenses and fees of such separate counsel and other expenses related to such participation to be reimbursed by the Company as incurred. Notwithstanding any other provision of this Agreement, the Company shall not settle any indemnified claim without the written consent of the Indemnified Party, unless the settlement thereof imposes no liability or obligation on, and includes a complete release from liability of, and does not include any admission of wrongdoing or malfeasance by, the Indemnified Party.

9. Miscellaneous.

9.1. Successors and Assigns. This Agreement may not be assigned by an Investor party hereto without the prior written consent of the Company or by the Company without the prior written consent of all of the Investors, as applicable; provided, however, that an Investor may assign its rights and delegate its duties hereunder in whole or in part to an Affiliate without the prior written consent of the Company, provided such assignee agrees in writing to be bound by the provisions hereof that apply to Investors. The provisions of this Agreement shall inure to the benefit of and be binding upon the respective permitted successors and assigns of the parties. Without limiting the generality of the foregoing, in the event that the Company is a party to a merger, consolidation, share exchange or similar business combination transaction in which the Common Stock is converted into the equity securities of another Person, from and after the effective time of such transaction, such Person shall, by virtue of such transaction, be deemed to have assumed the obligations of the Company hereunder, the term "Company" shall be deemed to refer to such Person and the term "Shares", "Warrants" and/or "Warrant Shares" shall be deemed to refer to the securities received by the Investors in exchange therefor in connection with such transaction. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective permitted successors and assigns any rights, remedies, obligations, or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement.

9.2. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via electronic mail (including pdf or any electronic signature complying with the U.S. ESIGN Act of 2000, *e.g.*, www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

9.3. Titles and Subtitles. The titles and subtitles used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

9.4. Notices. All notices and other communications under this Agreement must be in writing and are deemed duly delivered when (a) delivered if delivered personally or by nationally recognized overnight courier service (costs prepaid), (b) sent, if sent by electronic mail during normal business hours of the recipient, and if not sent during normal business hours, then on the first Business Day following such transmission or (c) received or rejected by the addressee, if sent by United States of America certified or registered mail, return receipt requested; in each case to the following addresses, facsimile numbers or e-mail addresses and marked to the attention of the individual (by name or title) designated below (or to such other address, facsimile number, e-mail address or individual as a party may designate by notice to the other parties):

If to the Company:

Lyra Therapeutics, Inc.
480 Arsenal Way
Watertown, MA 02472
Attention: Chief Executive Officer
E-mail: mpalasis@lyratx.com

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

Latham & Watkins LLP
200 Clarendon Street
Boston, MA 02116
Facsimile: (617) 948-6001
Attention: Wesley C. Holmes
E-mail: wesley.holmes@lw.com

If to the Investors:

to the addresses set forth on the signature pages hereto.

9.5. Expenses. Other than as set forth in Section 7.9, the parties hereto shall pay their own costs and expenses in connection herewith, regardless of whether the transactions contemplated hereby are consummated; it being understood that each of the Company and each Investor has relied on the advice of its own respective counsel.

9.6. Amendments and Waivers. Any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance and either retroactively or prospectively), only with the written consent of the Company and (a) prior to the Closing, Investors that agreed to purchase a majority of the Securities to be issued and sold pursuant to this Agreement (which majority must include Perceptive) and (b) following the Closing, the Required Investors and, for so long as Perceptive holds at least 50% of the Shares purchased by it at the Closing, Perceptive. 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 Investor without the written consent of such Investor unless such amendment or waiver applies to all Investors in the same fashion. Any amendment or waiver effected in accordance with this paragraph shall be binding upon (i) prior to Closing, each Investor and (ii) following the Closing, each holder of any Shares, Warrants or Warrant Shares purchased under this Agreement at the time outstanding, and in each case, each future holder of all such Shares, Warrants or Warrant Shares and the Company. For the avoidance of doubt, any provision herein requiring the calculation of the number of Securities as of any date, or the computation of a percentage of Securities, shall be deemed to refer to the number of Shares and Warrant Shares constituting Securities as of such date, including Warrant Shares issued or issuable upon exercise of Warrants constituting Securities, without regard to any limitation on the exercise of the Warrants.

9.7. Publicity. Except as set forth below, no public release or announcement concerning the transactions contemplated hereby shall be issued by the Company or any of the Investors without the prior written consent of the Company (in the case of a release or announcement by the Investors) or the Required Investors and Perceptive (in the case of a release or announcement by the Company) (which consents shall not be unreasonably withheld or delayed), except as such release or announcement may be required by law or the applicable rules or regulations of any securities exchange or securities market. Notwithstanding the foregoing, each Investor may identify the Company and the value of such Investor's security holdings in the Company in accordance with applicable investment reporting and disclosure regulations or internal policies without prior notice to or consent from the Company (including, for the avoidance of doubt, filings pursuant to Sections 13 and 16 of the 1934 Act). By 9:00 A.M. (New York City time) on the Trading Day immediately following the date of this Agreement, the Company shall issue a press release disclosing all material terms of transactions contemplated by this Agreement (the "Press Release"). No later than 5:30 p.m. (New York City time) on the fourth Business Day following the date of this Agreement, the Company will file a Current Report on Form 8-K (the "8-K") attaching the press release described in the foregoing sentence as well as copies of the Transaction Documents.

9.8. Third-Party Beneficiaries. Each of the Company and each Investor acknowledges and agrees that the Placement Agent is a third-party beneficiary of the representations and warranties contained in Sections 4 and 5, respectively.

9.9. Severability. Any provision of this Agreement that is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof but shall be interpreted as if it were written so as to be enforceable to the maximum extent permitted by applicable law, and any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction. To the extent permitted by applicable law, the parties hereby waive any provision of law which renders any provision hereof prohibited or unenforceable in any respect.

9.10. Entire Agreement. This Agreement, including the signature pages and Exhibits, and the other Transaction Documents constitute the entire agreement among the parties hereof with respect to the subject matter hereof and thereof and supersede all prior agreements, understandings and representations, both oral and written, between the parties with respect to the subject matter hereof and thereof.

9.11. Further Assurances. The parties shall execute and deliver all such further instruments and documents and take all such other actions as may reasonably be required to carry out the transactions contemplated hereby and to evidence the fulfillment of the agreements herein contained.

9.12. Governing Law; Consent to Jurisdiction; Waiver of Jury Trial. This Agreement (including all matters concerning the construction, validity, enforcement and interpretation hereof) shall be governed by, and construed in accordance with, the internal laws of the State of New York without regard to the choice of law principles thereof (other than Sections 5-1401 and 5-1402 of the General Obligations Law). Each of the parties hereto irrevocably submits to the exclusive jurisdiction of the courts of the State of New York located in New York County and the United States District Court for the Southern District of New York for the purpose of any suit, action, proceeding or judgment relating to or arising out of this Agreement and the transactions contemplated hereby. Service of process in connection with any such suit, action or proceeding may be served on each party hereto anywhere in the world by the same methods as are specified for the giving of notices under this Agreement. Each of the parties hereto irrevocably consents to the jurisdiction of any such court in any such suit, action or proceeding and to the laying of venue in such court. Each party hereto irrevocably waives any objection to the laying of venue of any such suit, action or proceeding brought in such courts and irrevocably waives any claim that any such suit, action or proceeding brought in any such court has been brought in an inconvenient forum. To the extent that the Company has or hereafter may acquire any immunity (on the grounds of sovereignty or otherwise) from the jurisdiction of any court or from any legal process with respect to itself or its property, the Company irrevocably waives, to the fullest extent permitted by law, such immunity in respect of any such suit, action or proceeding. **EACH OF THE PARTIES HERETO WAIVES ANY RIGHT TO REQUEST A TRIAL BY JURY IN ANY LITIGATION WITH RESPECT TO THIS AGREEMENT AND REPRESENTS THAT COUNSEL HAS BEEN CONSULTED SPECIFICALLY AS TO THIS WAIVER.**

9.13. Independent Nature of Investors' Obligations and Rights. The obligations of each Investor under any Transaction Document are several and not joint with the obligations of any other Investor, and no Investor shall be responsible in any way for the performance of the obligations of any other Investor under any Transaction Document. The decision of each Investor to purchase Securities pursuant to the Transaction Documents has been made by such Investor independently of any other Investor. Nothing contained herein or in any Transaction Document, and no action taken by any Investor pursuant thereto, shall be deemed to constitute the Investors as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Investors 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 Investor acknowledges that no other Investor has acted as agent for such Investor in connection with making its investment hereunder and that no Investor will be acting as agent of such Investor in connection with monitoring its investment in the Securities or enforcing its rights under the Transaction Documents. Each Investor 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 Investor to be joined as an additional party in any proceeding for such purpose.

9.14. Interpretation. Wherever required by the context of this Agreement, the singular shall include the plural and vice versa, and the masculine gender shall include the feminine and neuter genders and vice versa, and references to any agreement, document or instrument shall be deemed to refer to such agreement, document or instrument as amended, supplemented or modified from time to time. All article, section, paragraph or clause references not attributed to a particular document shall be references to such parts of this Agreement, and all exhibit, annex, letter and schedule references not attributed to a particular document shall be references to such exhibits, annexes, letters and schedules to this Agreement. In addition, the word "or" is not exclusive; the words "including," "includes," "included" and "include" are deemed to be followed by the words "without limitation"; and the terms "herein," "hereof" and "hereunder" and other words of similar import refer to this Agreement as a whole and not to any particular section, paragraph or subdivision.

[remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

COMPANY:

LYRA THERAPEUTICS, INC.

By: /s/ Maria Palasis
Name: Maria Palasis, Ph.D.
Title: Chief Executive Officer

INVESTOR:

Entity: Pura Vida Master Fund, Ltd.

Signature: /s/ Efrem Kamen
Name: Efrem Kamen
Title: Managing Member of Pura Vida Investments, LLC, in its capacity as investment manager to Investor

Investor Information

Entity Name:	Pura Vida Master Fund, Ltd.
Contact Person:	Cara Bradfield – invops@puravidafunds.com
Telephone:	646-757-2184
Email:	invops@puravidafunds.com; doris@puravidafunds.com; Adi@puravidafunds.com
Correspondence Address Only (see registered address below):	c/o Pura Vida Investments, LLC 512 West 22nd Street, 7th Floor New York, NY 10011 USA
Registered Address:	c/o Walkers Corporate Limited 190 Elgin Avenue, George Town Grand Cayman KY1-9008 CAYMAN ISLANDS
Tax ID #:	***
Name in which Securities should be issued:	Pura Vida Master Fund, Ltd.

INVESTOR:

Entity: Highmark Limited, in respect of its Segregated Account Highmark Long/Short Equity 20

Signature: /s/ Efrem Kamen
Name: Efrem Kamen
Title: Managing Member of Pura Vida Investments, LLC, in its capacity as investment manager to Investor

Investor Information

Entity Name:	Highmark Limited, in respect of its Segregated Account Highmark Long/Short Equity 20
Contact Person:	Cara Bradfield – invops@puravidafunds.com
Telephone:	646-757-2184
Email:	invops@puravidafunds.com; doris@puravidafunds.com; Adi@puravidafunds.com
Correspondence Address Only (see registered address below):	c/o Pura Vida Investments, LLC 512 West 22nd Street, 7th Floor New York, NY 10011 USA
Registered Address:	Highmark Limited, Clarendon House 2 Church Street Hamilton HM 11 BERMUDA
Tax ID #:	***
Name in which Securities should be issued:	Highmark Limited, in respect of its Segregated Account Highmark Long/Short Equity 20

INVESTOR:

Entity: Walleye Opportunities Master Fund Ltd

Signature: /s/ Efrem Kamen
Name: Efrem Kamen
Title: Managing Member of Pura Vida Investments, LLC, in its capacity as sub-adviser to Investor

Investor Information

Entity Name:	Walleye Opportunities Master Fund Ltd
Contact Person:	Cara Bradfield – invops@puravidafunds.com
Telephone:	646-757-2184
Email:	invops@puravidafunds.com; doris@puravidafunds.com; Adi@puravidafunds.com
Correspondence Address Only (see registered address below):	c/o Pura Vida Investments, LLC 512 West 22nd Street, 7th Floor New York, NY 10011 USA
Registered Address:	c/o Walkers Corporate Limited 190 Elgin Avenue, George Town Grand Cayman KY1-9008 CAYMAN ISLANDS
Tax ID #:	***
Name in which Securities should be issued:	Walleye Opportunities Master Fund Ltd

INVESTOR:

Entity: Sea Hawk Multi-Strategy Master Fund Ltd

Signature: /s/ Efrem Kamen
Name: Efrem Kamen
Title: Managing Member of Pura Vida Investments, LLC, in its capacity as sub-adviser to Investor

Investor Information

Entity Name:	Sea Hawk Multi-Strategy Master Fund Ltd
Contact Person:	Cara Bradfield – invops@puravidafunds.com
Telephone:	646-757-2184
Email:	invops@puravidafunds.com; doris@puravidafunds.com; Adi@puravidafunds.com
Correspondence Address Only (see registered address below):	c/o Pura Vida Investments, LLC 512 West 22nd Street, 7th Floor New York, NY 10011 USA
Registered Address:	c/o Walkers Corporate Limited 190 Elgin Avenue, George Town Grand Cayman KY1-9008 CAYMAN ISLANDS
Tax ID #:	***
Name in which Securities should be issued:	Sea Hawk Multi-Strategy Master Fund Ltd

INVESTOR:

Entity: Walleye Manager Opportunities LLC

Signature: /s/ Efrem Kamen
Name: Efrem Kamen
Title: Managing Member of Pura Vida Investments, LLC, in its capacity as sub-adviser to Investor

Investor Information

Entity Name:	Walleye Manager Opportunities LLC
Contact Person:	Cara Bradfield – invops@puravidafunds.com
Telephone:	646-757-2184
Email:	invops@puravidafunds.com; doris@puravidafunds.com; Adi@puravidafunds.com
Correspondence Address Only (see registered address below):	c/o Pura Vida Investments, LLC 512 West 22nd Street, 7th Floor New York, NY 10011 USA
Registered Address:	1209 Orange Street Wilmington, DE 1980 USA
Tax ID #:	***
Name in which Securities should be issued:	Walleye Manager Opportunities LLC

INVESTOR:

Entity: Pura Vida X Fund LP

Signature: /s/ Efrem Kamen
Name: Efrem Kamen
Title: Managing Member of Pura Vida Investments, LLC, in its capacity as investment manager to Investor

Investor Information

Entity Name:	Pura Vida X Fund LP
Contact Person:	Cara Bradfield – invops@puravidafunds.com
Telephone:	646-757-2184
Email:	invops@puravidafunds.com; doris@puravidafunds.com; Adi@puravidafunds.com
Correspondence Address Only (see registered address below):	c/o Pura Vida Investments, LLC 512 West 22nd Street, 7th Floor New York, NY 10011 USA
Registered Address:	251 Little Falls Drive Wilmington, DE 19808 USA
Tax ID #:	***
Name in which Securities should be issued:	Pura Vida X Fund LP

INVESTOR:

Entity: Lockheed Martin Corporation Master Retirement Trust

Signature: /s/ Efrem Kamen
Name: Efrem Kamen
Title: Managing Member of Pura Vida Investments, LLC, in its capacity as investment manager to Investor

Investor Information

Entity Name:	Lockheed Martin Corporation Master Retirement Trust
Contact Person:	Cara Bradfield – invops@puravidafunds.com
Telephone:	646-757-2184
Email:	invops@puravidafunds.com; doris@puravidafunds.com; Adi@puravidafunds.com
Correspondence Address Only (see registered address below):	c/o Pura Vida Investments, LLC 512 West 22nd Street, 7th Floor New York, NY 10011 USA
Registered Address:	c/o The Northern Trust Company 333 S. Wabash, WB-42, Chicago, IL 60604 USA
Tax ID #:	***
Name in which Securities should be issued:	Lockheed Martin Corporation Master Retirement Trust

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

By: /s/ Harlan Waksal
Harlan Waksal, M.D.

Investor Information

Name:	Harlan Waksal
Contact Person:	
Registered Address:	7 North Willow Street, Suite A Montclair, NJ 07042 Telephone: 917-658-6069 Email: hwaksal@lyratx.com
Notice Particulars:	*** Email: hwaksal@lyratx.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	Harlan Waksal

INVESTOR:

MLPF&S CUSTODIAN FPO TIM FOSTER IRRA FBO TIM FOSTER

Signature: /s/ Tim Foster
Name: Tim Foster
Title: Authorized Signatory

Investor Information

Entity Name:	MLPF&S Custodian FPO Tim Foster IRRA FBO Tim Foster
Contact Person:	Timothy Foster
Address:	***
City:	***
State:	***
Zip Code:	***
Telephone:	***
Facsimile:	N/A
Email:	***
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	MLPF&S Custodian FPO Tim Foster IRRA FBO Tim Foster

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

NORTH BRIDGE VENTURE PARTNERS V-A, L.P.

By: North Bridge Venture Management V, L.P.
Its: General Partner

By: NBVM GP, LLC
Its: General Partner

By: /s/ Edward T. Anderson
Name: Edward T. Anderson
Title: Manager

Investor Information

Entity Name:	NORTH BRIDGE VENTURE PARTNERS V-A, L.P. By: North Bridge Venture Management V, L.P. Its: General Partner By: NBVM GP, LLC Its: General Partner
Contact Person:	Edward T. Anderson, Manager
Registered Address:	60 William Street, Suite 350 Wellesley, MA 02481
Notice Particulars:	60 William Street, Suite 350 Wellesley, MA 02481 Telephone: 781-290-0004 Email: eta@northbridge.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	NORTH BRIDGE VENTURE PARTNERS V-A, L.P.

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

NORTH BRIDGE VENTURE PARTNERS V-B, L.P.

By: North Bridge Venture Management V, L.P.
Its: General Partner

By: NBVM GP, LLC
Its: General Partner

By: /s/ Edward T. Anderson
Name: Edward T. Anderson
Title: Manager

Investor Information

Entity Name:	NORTH BRIDGE VENTURE PARTNERS V-B, L.P. By: North Bridge Venture Management V, L.P. Its: General Partner By: NBVM GP, LLC Its: General Partner
Contact Person:	Edward T. Anderson, Manager
Registered Address:	60 William Street, Suite 350 Wellesley, MA 02481
Notice Particulars:	60 William Street, Suite 350 Wellesley, MA 02481 Telephone: 781-290-0004 Email: eta@northbridge.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	NORTH BRIDGE VENTURE PARTNERS V-B, L.P.

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

NORTH BRIDGE VENTURE PARTNERS VI, L.P.

By: North Bridge Venture Management VI, L.P.
Its: General Partner

By: NBVM GP, LLC
Its: General Partner

By: /s/ Edward T. Anderson
Name: Edward T. Anderson
Title: Manager

Investor Information

Entity Name:	NORTH BRIDGE VENTURE PARTNERS VI, L.P. By: North Bridge Venture Management VI, L.P. Its: General Partner By: NBVM GP, LLC Its: General Partner
Contact Person:	Edward T. Anderson, Manager
Registered Address:	60 William Street, Suite 350 Wellesley, MA 02481
Notice Particulars:	60 William Street, Suite 350 Wellesley, MA 02481 Telephone: 781-290-0004 Email: eta@northbridge.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	NORTH BRIDGE VENTURE PARTNERS VI, L.P.

INVESTOR:

Entity: Perceptive Life Sciences Master Fund, Ltd.

Signature: /s/ James H. Mannix
Name: James H. Mannix
Title: Chief Operating Officer

Investor Information

Entity Name:	Perceptive Life Sciences Master Fund, Ltd.
Contact Person:	James H. Mannix
Address:	51 Astor Place, 10th Floor
City:	New York
State:	NY
Zip Code:	10003
Telephone:	646-205-5300
Facsimile:	646-205-5301
Email:	accounting@perceptivelife.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	Perceptive Life Sciences Master Fund, Ltd.

INVESTOR:

[*if signatory is an individual*]

Signature: _____
Name: _____

[*if signatory is an entity*]

Entity: INVESTOR COMPANY ITF
ROSALIND MASTER FUND L.P.

Signature: /s/ Steven Salamon
Name: Steven Salamon
Title: President, Rosalind Advisors, Inc.
(adviser to Rosalind Master Fund L.P.)

Investor Information

Entity Name:	INVESTOR COMPANY ITF ROSALIND MASTER FUND L.P.
Contact Person:	Steven Salamon
Address:	175 Bloor St East, Suite 1316, North Tower
City:	Toronto
State:	Ontario
Zip Code:	M4W 3R8
Telephone:	(416) 791-0300 X3
Facsimile:	(416) 850-5166
Email:	ops@rosalindcap.com /steven@rosalindcap.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	INVESTOR COMPANY ITF ROSALIND MASTER FUND LP

INVESTOR:

[*if signatory is an individual*]

Signature: _____
Name: _____

[*if signatory is an entity*]

Entity: CVI Investments, Inc., By: Heights Capital Management, Inc., its authorized agent

Signature: /s/ Martin Kobinger
Name: Martin Kobinger
Title: President

Investor Information

Entity Name:	CVI Investments, Inc.
Contact Person:	Sam Winer
Address:	C/O Heights Capital Management, Inc. 101 California Street, Suite 3250
City:	San Francisco
State:	CA
Zip Code:	94111
Telephone:	(415) 403-6500
Facsimile:	
Email:	winer@sig.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	CVI Investments, Inc.

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

By: /s/ Craig A. Wheeler
Craig A. Wheeler

Investor Information

Name:	Craig A. Wheeler
Contact Person:	
Registered Address:	***
Notice Particulars:	*** Email: cwheeler@headwatersbiotech.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	Craig A. Wheeler

INVESTOR:

[*if signatory is an individual*]

Signature: _____
Name: _____

[*if signatory is an entity*]

Entity: SOLEUS CAPITAL MASTER FUND, L.P.
By: Soleus Capital, LLC, as general partner

Signature: /s/ Steven Musumeci
Name: Steven Musumeci
Title: Chief Operating Officer

Investor Information

Entity Name:	SOLEUS CAPITAL MASTER FUND, L.P
Contact Person:	Steven Musumeci
Address:	104 Field Point Road, 2nd Floor
City:	Greenwich
State:	CT
Zip Code:	06830
Telephone:	475-208-3178
Facsimile:	475-223-0865
Email:	Steven@soleuscapital.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	SOLEUS CAPITAL MASTER FUND, L.P.

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

By: /s/ Edward T. Anderson
Edward T. Anderson

Investor Information

Name:	Edward T. Anderson
Contact Person:	
Registered Address:	***
Notice Particulars:	60 William Str. Suite 350 Wellesley, MA 02481
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	Edward T. Anderson

INVESTOR:

[*if signatory is an individual*]

Signature: _____
Name: _____

[*if signatory is an entity*]

Entity: Armistice Capital Master Fund Ltd.

Signature: /s/ Steven Boyd
Name: Steven Boyd
Title: CIO of Armistice Capital, LLC, the Investment Manager

Investor Information

Entity Name:	Armistice Capital Master Fund Ltd.
Contact Person:	Scott Miller; Brian Kohn
Address:	c/o Armistice Capital, LLC 510 Madison Avenue, 7th Floor
City:	New York
State:	New York
Zip Code:	10022
Telephone:	(212) 231-4930
Facsimile:	
Email:	smiller@armisticecapital.com; bkohn@armisticecapital.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	Armistice Capital Master Fund Ltd.

INVESTOR:

NANTAHALA CAPITAL PARTNERS SI, LP

By: Nantahala Capital Management, LLC
Its Investment Manager

By: /s/ Wilmot Harkey
Name: Wilmot Harkey
Title: Manager

Legal Entity Name and Address:

Nantahala Capital Partners SI, LP
130 Main St. 2nd Floor
New Canaan, CT 06840

Notifications:

Contact: Operations Team

Email (preferred): operations@nantahalapartners.com

Copy to legal address for physical.

Tax ID: ***

INVESTOR:

NCP RFM LP

By: Nantahala Capital Management, LLC
Its Investment Manager

By: /s/ Wilmot Harkey
Name: Wilmot Harkey
Title: Manager

Legal Entity Name and Address:

NCP RFM LP
130 Main St. 2nd Floor
New Canaan, CT 06840

Notifications:

Contact: Operations Team

Email (preferred): operations@nantahalapartners.com

Copy to legal address for physical.

Tax ID: ***

INVESTOR:

NCP CB LP

By: Nantahala Capital Management, LLC
Its Investment Manager

By: /s/ Wilmot Harkey
Name: Wilmot Harkey
Title: Manager

Legal Entity Name and Address:

NCP CB LP
130 Main St. 2nd Floor
New Canaan, CT 06840

Notifications:

Contact: Operations Team

Email (preferred): operations@nantahalapartners.com

Copy to legal address for physical.

Tax ID: ***

INVESTOR:

Pinehurst Partners, L.P., solely with respect to the portion of its assets for which Nantahala Capital Management, LLC acts as its Sub-Advisor

By: Nantahala Capital Management, LLC
Its Sub-Advisor

By: /s/ Wilmot Harkey
Name: Wilmot Harkey
Title: Manager

Legal Entity Name and Address:

Pinehurst Partners, L.P.
c/o Corporation Trust Center
1209 Orange Street
Wilmington, DE 19801

Notifications:

Contact: Operations Team

Email (preferred): operations@nantahalapartners.com

Notifications:

Contact: Operations Team(s)

Email (preferred): operations@nantahalapartners.com; fof-ops@corbincapital.com

Copy to legal address above, Sub-Advisor below, and operational address below for physical.

c/o Nantahala Capital Management, LLC
130 Main St. 2nd Floor
New Canaan, CT 06840

With a copy to:

Pinehurst Partners, L.P.
590 Madison Avenue
31st Floor
New York, NY 10022

Tax ID: ***

INVESTOR:

NANTAHALA CAPITAL PARTNERS LIMITED PARTNERSHIP

By: Nantahala Capital Management, LLC
Its General Partner

By: /s/ Wilmot Harkey
Name: Wilmot Harkey
Title: Manager

Legal Entity Name and Address:

Nantahala Capital Partners Limited Partnership
130 Main St. 2nd Floor
New Canaan, CT 06840

Notifications:

Contact: Operations Team

Email (preferred): operations@nantahalapartners.com

Copy to legal address for physical.

Tax ID: ***

INVESTOR:

NANTAHALA CAPITAL PARTNERS II LIMITED PARTNERSHIP

By: Nantahala Capital Management, LLC
Its General Partner

By: /s/ Wilmot Harkey
Name: Wilmot Harkey
Title: Manager

Legal Entity Name and Address:

Nantahala Capital Partners II Limited Partnership
130 Main St. 2nd Floor
New Canaan, CT 06840

Notifications:

Contact: Operations Team

Email (preferred): operations@nantahalapartners.com

Copy to legal address for physical.

Tax ID: ***

INVESTOR:

Corbin Hedged Equity Fund, L.P., solely with respect to the portion of its assets for which Nantahala Capital Management, LLC acts as its Sub-Advisor

By: Nantahala Capital Management, LLC
Its Sub-Advisor

By: /s/ Wilmot Harkey
Name: Wilmot Harkey
Title: Manager

Legal Entity Name and Address:

Corbin Hedged Equity Fund, L.P.
c/o Corporation Trust Center
1209 Orange Street
Wilmington, DE 19801

Notifications:

Contact: Operations Team

Email (preferred): operations@nantahalapartners.com

Notifications:

Contact: Operations Team(s)

Email (preferred): operations@nantahalapartners.com; fof-ops@corbincapital.com

Copy to legal address above, Sub-Advisor below, and operational address below for physical.

c/o Nantahala Capital Management, LLC
130 Main St. 2nd Floor
New Canaan, CT 06840

With a copy to:

Corbin Hedged Equity Fund, L.P.
590 Madison Avenue
31st Floor
New York, NY 10022

Tax ID: ***

INVESTOR:

BLACKWELL PARTNERS LLC - SERIES A, solely with respect to the portion of its assets for which Nantahala Capital Management, LLC acts as its Investment Manager

By: Nantahala Capital Management, LLC
Its Investment Manager

By: /s/ Wilmot Harkey
Name: Wilmot Harkey
Title: Manager

Legal Entity Name and Address:

Blackwell Partners LLC – Series A
280 South Mangum Street, Suite 210
Durham, NC 27701

Notifications:

Contact: Operations Team; Jannine Lall

Email (preferred): operations@nantahalapartners.com; jlall@dumac.duke.edu

Copy to legal address above and investment manager below for physical.

c/o Nantahala Capital Management, LLC
130 Main St. 2nd Floor
New Canaan, CT 06840

Tax ID: ***

INVESTOR:

[*if signatory is an individual*]

Signature: _____
Name: _____

[*if signatory is an entity*]

Entity: Samsara BioCapital, L.P.

Signature: /s/ Srinivas Akkaraju
Name: Srinivas Akkaraju, MD, PhD
Title: Managing Member

Investor Information

Entity Name:	Samsara BioCapital, L.P.
Contact Person:	Srinivas Akkaraju
Address:	628 Middlefield Road
City:	Palo Alto
State:	California
Zip Code:	94301
Telephone:	650-285-4270
Facsimile:	N/A
Email:	srini@samsaracap.com; Christian@samsaracap.com; rich@samsaracap.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	Samsara BioCapital, L.P.

INVESTOR:

[*if signatory is an individual*]

Signature: _____
Name: _____

[*if signatory is an entity*]

Entity: Altium Growth Fund, LP

Signature: /s/ Mark Gottlieb
Name: Mark Gottlieb
Title: COO

Investor Information

Entity Name:	Altium Growth Fund, LP
Contact Person:	Mark Gottlieb
Address:	152 W 57th St, 20th Floor
City:	New York
State:	NY
Zip Code:	10019
Telephone:	212-259-8400
Facsimile:	
Email:	legal@altiumcap.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	Altium Growth Fund, LP

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

VENROCK HEALTHCARE CAPITAL PARTNERS EG, L.P.

By: VHCP Management EG, LLC
Its: General Partner

By: /s/ Nimish Shah
Authorized Signatory

Investor Information

Entity Name:	VENROCK HEALTHCARE CAPITAL PARTNERS EG, L.P. By: VHCP Management EG, LLC, its general partner
Contact Person:	Nimish Shah
Registered Address:	7 Bryant Park, 23rd Floor, New York, NY 10018
Notice Particulars:	nshah@venrockcp.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	VENROCK HEALTHCARE CAPITAL PARTNERS EG, L.P.

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

VENROCK HEALTHCARE CAPITAL PARTNERS III, L.P.

By: VHCP Management III, LLC
Its: General Partner

By: VR Advisor, LLC
Its: Manager

By: /s/ Nimish Shah
Authorized Signatory

Investor Information

Entity Name:	VENROCK HEALTHCARE CAPITAL PARTNERS III, L.P. By: VHCP Management III, LLC, its general partner By: VR Advisor, LLC, its manager
Contact Person:	Nimish Shah
Registered Address:	7 Bryant Park, 23rd Floor, New York, NY 10018
Notice Particulars:	nshah@venrockcp.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	VENROCK HEALTHCARE CAPITAL PARTNERS III, L.P.

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

VHCP CO-INVESTMENT HOLDINGS III, LLC

By: VHCP Management III, LLC
Its: Manager

By: VR Advisor, LLC
Its: Manager

By: /s/ Nimish Shah
Authorized Signatory

Investor Information

Entity Name:	VHCP CO-INVESTMENT HOLDINGS III, LLC By: VHCP Management III, LLC, its general partner By: VR Advisor, LLC, its manager
Contact Person:	Nimish Shah
Registered Address:	7 Bryant Park, 23rd Floor, New York, NY 10018
Notice Particulars:	nshah@venrockcp.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	VHCP CO-INVESTMENT HOLDINGS III, LLC

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

VENROCK HEALTHCARE CAPITAL PARTNERS II, L.P.

By: VHCP Management II, LLC
Its: General Partner

By: /s/ Nimish Shah
Authorized Signatory

Investor Information

Entity Name:	VENROCK HEALTHCARE CAPITAL PARTNERS II, L.P. By: VHCP Management II, LLC, its general partner
Contact Person:	Nimish Shah
Registered Address:	7 Bryant Park, 23rd Floor, New York, NY 10018
Notice Particulars:	nshah@venrockcp.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	VENROCK HEALTHCARE CAPITAL PARTNERS II, L.P.

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

VHCP CO-INVESTMENT HOLDINGS II, LLC

By: VHCP Management II, LLC
Its: Manager

By: /s/ Nimish Shah
Authorized Signatory

Investor Information

Entity Name:	VHCP CO-INVESTMENT HOLDINGS II, LLC By: VHCP Management II, LLC, its manager
Contact Person:	Nimish Shah
Registered Address:	7 Bryant Park, 23rd Floor, New York, NY 10018
Notice Particulars:	nshah@venrockcp.com
Tax ID # or Social Security #:	***
Name in which Securities should be issued:	VHCP CO-INVESTMENT HOLDINGS II, LLC

EXHIBIT A
Schedule of Share Investors

Share Investor Name and Address	Number of Shares to be Purchased	Aggregate Purchase Price of Shares
Pura Vida Master Fund, Ltd. c/o Walkers Corporate Limited 190 Elgin Avenue George Town, Grand Cayman KY1-9008 Cayman Islands Email: invops@puravidafunds.com; doris@puravidafunds.com; adi@puravidafunds.com	729,621	$3,079,000.62
Highmark Limited, in respect of its Segregated Account Highmark Long/Short Equity 20 Clarendon House 2 Church Street Hamilton HM 11 Bermuda Email: invops@puravidafunds.com; doris@puravidafunds.com; adi@puravidafunds.com	318,483	$1,343,998.26
Walleye Opportunities Master Fund Ltd c/o Walkers Corporate Limited 190 Elgin Avenue George Town, Grand Cayman KY1-9008 Cayman Islands Email: invops@puravidafunds.com; doris@puravidafunds.com; adi@puravidafunds.com	63,389	$ 267,501.58
Sea Hawk Multi-Strategy Master Fund Ltd c/o Walkers Corporate Limited 190 Elgin Avenue George Town, Grand Cayman KY1-9008 Cayman Islands Email: invops@puravidafunds.com; doris@puravidafunds.com; adi@puravidafunds.com	31,398	$ 132,499.56
Walleye Manager Opportunities LLC 1209 Orange Street Wilmington, DE 19801 USA Email: invops@puravidafunds.com; doris@puravidafunds.com; adi@puravidafunds.com	41,943	$ 176,999.46

Pura Vida X Fund LP 251 Little Falls Drive Wilmington, DE 19808 USA Email: invops@puravidafunds.com; doris@puravidafunds.com; adi@puravidafunds.com	423,327	$ 1,786,439.94
Lockheed Martin Corporation Master Retirement Trust c/o The Northern Trust Company 333 S. Wabash, WB-42 Chicago, IL 60604 USA Email: invops@puravidafunds.com; doris@puravidafunds.com; adi@puravidafunds.com	761,507	$ 3,213,559.54
Harlan Waksal 7 North Willow Street, Suite A Montclair, NJ 07042 Email: hwaksal@lyratx.com	236,966	$ 999,996.52
MLPF&S Custodian FPO Tim Foster IRRA FBO Tim Foster ***	118,483	$ 499,998.26
North Bridge Venture Partners V-A, L.P. 60 William Street, Suite 350 Wellesley, MA 02481 Email: eta@northbridge.com	1,076,851	$ 4,544,315.44
North Bridge Venture Partners V-B, L.P. 60 William Street, Suite 350 Wellesley, MA 02481 Email: eta@northbridge.com	527,806	$ 2,227,341.32
North Bridge Venture Partners VI, L.P. 60 William Street, Suite 350 Wellesley, MA 02481 Email: eta@northbridge.com	765,010	$ 3,228,342.20
Perceptive Life Sciences Master Fund, Ltd. 51 Astor Place, 10th Floor New York, NY 10003 Email: accounting@perceptivelife.com	5,924,170	$24,999,997.40
Investor Company ITF Rosalind Master Fund L.P. 175 Bloor St East, Suite 1316, North Tower Toronto, Ontario M4W 3R8 Email: ops@rosalindcap.com; steven@rosalindcap.com	1,184,834	$ 4,999,999.48

CVI Investments, Inc. c/o Heights Capital Management, Inc. 101 California Street, Suite 3250 San Francisco, CA 94111 Email: winer@sig.com	236,966	$ 999,996.52
Craig A. Wheeler Email: cwheeler@headwatersbiotech.com	118,483	$ 499,998.26
Soleus Capital Master Fund, L.P. 104 Field Point Road, 2nd Floor Greenwich, CT 06830 Email: steven@soleuscapital.com	592,417	$2,499,999.74
Edward T. Anderson Email: eta@northbridge.com	118,483	$ 499,998.26
Armistice Capital Master Fund Ltd. c/o Armistice Capital, LLC 510 Madison Avenue, 7th Floor New York, NY 10022 Email: smiller@armisticecapital.com; bkohn@armisticecapital.com	355,450	$1,499,999.00
Nantahala Capital Partners SI, LP 130 Main St. 2nd Floor New Canaan, CT 06840 Email: operations@nantahalapartners.com	1,186,041	$5,005,093.02
NCP RFM LP 130 Main St. 2nd Floor New Canaan, CT 06840 Email: operations@nantahalapartners.com	129,108	$ 544,835.76
NCP CB LP 130 Main St. 2nd Floor New Canaan, CT 06840 Email: operations@nantahalapartners.com	350,558	$1,479,354.76

Pinehurst Partners, L.P., solely with respect to the portion of its assets for which Nantahala Capital Management, LLC acts as its Sub-Advisor c/o Corporation Trust Center 1209 Orange Street Wilmington, DE 19801 Email: operations@nantahalapartners.com; fof-ops@corbincapital.com	66,464	$ 280,478.08
Nantahala Capital Partners Limited Partnership 130 Main St. 2nd Floor New Canaan, CT 06840 Email: operations@nantahalapartners.com	116,430	$ 491,334.60
Nantahala Capital Partners II Limited Partnership 130 Main St. 2nd Floor New Canaan, CT 06840 Email: operations@nantahalapartners.com	165,008	$ 696,333.76
Corbin Hedged Equity Fund, L.P., solely with respect to the portion of its assets for which Nantahala Capital Management, LLC acts as its Sub-Advisor c/o Corporation Trust Center 1209 Orange Street Wilmington, DE 19801 Email: operations@nantahalapartners.com; fof-ops@corbincapital.com	23,231	$ 98,034.82
Blackwell Partners LLC—Series A, solely with respect to the portion of its assets for which Nantahala Capital Management, LLC acts as its Investment Manager 280 South Mangum Street, Suite 210 Durham, NC 27701 Email: operations@nantahalapartners.com; jlall@dumac.duke.edu	332,828	$1,404,534.16
Samsara BioCapital, L.P. 628 Middlefield Road Palo Alto, CA 94301 Email: srini@samsaracap.com; Christian@samsaracap.com; rich@samsaracap.com	1,777,251	$7,499,999.22
Altium Growth Fund, LP 152 W 57th St, 20th Floor New York, NY 10019 Email: legal@altiumcap.com	118,483	$ 499,998.26
Venrock Healthcare Capital Partners EG, L.P. 7 Bryant Park, 23rd Floor New York, NY 10018 Email: nshah@venrockcp.com	361,628	$1,526,070.16

Venrock Healthcare Capital Partners III, L.P. 7 Bryant Park, 23rd Floor New York, NY 10018 Email: nshah@venrockcp.com	321,426	$ 1,356,417.72
VHCP Co-Investment Holdings III, LLC 7 Bryant Park, 23rd Floor New York, NY 10018 Email: nshah@venrockcp.com	32,161	$ 135,719.42
Venrock Healthcare Capital Partners II, L.P. 7 Bryant Park, 23rd Floor New York, NY 10018 Email: nshah@venrockcp.com	148,699	$ 627,509.78
VHCP Co-Investment Holdings II, LLC 7 Bryant Park, 23rd Floor New York, NY 10018 Email: nshah@venrockcp.com	60,256	$ 254,280.32
Totals:	**18,815,159**	**$79,399,970.98**

EXHIBIT B
Schedule of Warrant Investors

Investor Name and Address	Number of Shares Underlying Warrants to be Purchased	Aggregate Purchase Price of Warrants	Aggregate Exercise Price of Warrants	Aggregate Total Purchase Price Plus Exercise Price of Warrants
Venrock Healthcare Capital Partners EG, L.P. 7 Bryant Park, 23rd Floor New York, NY 10018 Email: nshah@venrockcp.com	1,956,500	$ 8,254,473.50	$1,956.50	$ 8,256,430.00
Venrock Healthcare Capital Partners III, L.P. 7 Bryant Park, 23rd Floor New York, NY 10018 Email: nshah@venrockcp.com	1,739,000	$ 7,336,841.00	$1,739.00	$ 7,338,580.00
VHCP Co-Investment Holdings III, LLC 7 Bryant Park, 23rd Floor New York, NY 10018 Email: nshah@venrockcp.com	174,000	$ 734,106.00	$ 174.00	$ 734,280.00
Venrock Healthcare Capital Partners II, L.P. 7 Bryant Park, 23rd Floor New York, NY 10018 Email: nshah@venrockcp.com	804,500	$ 3,394,185.50	$ 804.50	$ 3,394,990.00
VHCP Co-Investment Holdings II, LLC 7 Bryant Park, 23rd Floor New York, NY 10018 Email: nshah@venrockcp.com	326,000	$ 1,375,394.00	$ 326.00	$ 1,375,720.00
Totals:	**5,000,000**	**$21,095,000.00**	**$5,000.00**	**$21,100,000.00**

EXHIBIT C

Form of Warrant

EXHIBIT D

Form of Registration Rights Agreement

APPENDIX I

Form of Investor Questionnaire

APPENDIX II

Form of Selling Stockholder Questionnaire

Exhibit 10.2

REGISTRATION RIGHTS AGREEMENT

This REGISTRATION RIGHTS AGREEMENT (this "Agreement") is made and entered into as of April 7, 2022 by and among Lyra Therapeutics, Inc., a Delaware corporation (the "Company"), and the "Investors" named in the Securities Purchase Agreement, dated as of the date hereof, by and among the Company and the Investors identified on Exhibit A attached thereto (the "Purchase Agreement"). Capitalized terms used herein have the respective meanings ascribed thereto in the Purchase Agreement unless otherwise defined herein.

The parties hereby agree as follows:

1. Certain Definitions.

As used in this Agreement, the following terms shall have the following meanings:

"Common Stock" means the Company's Common Stock, par value $0.001 per share.

"Closing Date" has the meaning ascribed to it in the Purchase Agreement.

"Investors" means the Investors identified in the Purchase Agreement and any Affiliate or permitted transferee of any such Investor who is a subsequent holder of Registrable Securities.

"Prospectus" means (i) the prospectus included in any Registration Statement, as amended or supplemented by any prospectus supplement, with respect to the terms of the offering of any portion of the Registrable Securities covered by such Registration Statement and by all other amendments and supplements to the prospectus, including post-effective amendments and all material incorporated by reference in such prospectus, and (ii) any "free writing prospectus" as defined in Rule 405 under the 1933 Act.

"Register," "registered" and "registration" refer to a registration made by preparing and filing a Registration Statement or similar document in compliance with the 1933 Act, and the declaration or ordering of effectiveness of such Registration Statement or document.

"Registrable Securities" means (i) the Shares and the 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 the Warrant Shares; provided, however, that any such Registrable Securities shall cease to be Registrable Securities (and the Company shall not be required to maintain the effectiveness of any, or file another, Registration Statement hereunder with respect thereto) upon the first to occur of (A) a Registration Statement with respect to the sale of such Registrable Securities being declared effective by the SEC under the 1933 Act and such Registrable Securities having been disposed of by the holder thereof in accordance with such effective Registration Statement, (B) such Registrable Securities having been sold in accordance with Rule 144 (or another exemption from the registration requirements of the 1933 Act), (C) such Registrable Securities becoming eligible for resale without volume or manner-of-sale restrictions and without current public information requirements pursuant to Rule 144 and (D) the second anniversary of the Closing Date. For the avoidance of doubt, any provision herein requiring the calculation of the number of Registrable Securities as of any date, or the computation of a percentage of Registrable Securities, shall be deemed to refer to the number of Warrant Shares constituting Registrable Securities as of such date, without regard to any limitation on the exercise of the Warrants.

"Registration Statement" means any registration statement of the Company under the 1933 Act that covers the resale of any of the Registrable Securities pursuant to the provisions of this Agreement, amendments and supplements to such Registration Statement, including post-effective amendments, all exhibits and all material incorporated by reference in such Registration Statement.

"Required Investors" means the Investors holding a majority of the Registrable Securities outstanding from time to time.

"SEC" means the U.S. Securities and Exchange Commission.

"SEC Guidance" means (i) any publicly-available written or oral guidance of the SEC staff, or any comments, requirements or requests of the SEC staff and (ii) the 1933 Act.

"Securities" means, collectively, the Shares and the Warrants.

"Shares" means, collectively, the shares of Common Stock purchased by the Share Investors pursuant to the Purchase Agreement, other than any IRA Covered Shares (as defined in the Purchase Agreement).

"Warrants" means, collectively, the pre-funded warrants to purchase Common Stock purchased by the Warrant Investors pursuant to the Purchase Agreement.

"Warrant Shares" means shares of Common Stock issuable upon exercise of the Warrants.

2. Registration.

(a) Registration Statements.

(i) Promptly following the Closing Date but no later than thirty (30) calendar days after the Closing Date (the "Filing Deadline"), the Company shall prepare and file with the SEC one Registration Statement covering the resale of all of the Registrable Securities which, for the avoidance of doubt, may also register the sale or issuance of primary securities. Subject to any SEC comments, such Registration Statement shall include the plan of distribution, substantially in the form and substance, set forth in Part III of each Investor's Selling Stockholder Notice and Questionnaire. Such Registration Statement also shall cover, to the extent allowable under the 1933 Act and the rules promulgated thereunder (including Rule 416), such indeterminate number of additional shares of Common Stock resulting from stock splits, stock dividends or similar transactions with respect to the Registrable Securities. Such Registration Statement (and each amendment or supplement thereto, and each request for acceleration of effectiveness thereof) shall be provided in accordance with Section 3(c) to the Investors prior to its filing or other submission. If a Registration Statement covering the Registrable Securities is not filed with the SEC on or prior to the Filing Deadline, the Company will make pro rata payments to each Investor, as liquidated damages and not as a penalty, in an amount equal to 1% of the aggregate amount paid

pursuant to the Purchase Agreement by such Investor for such Registrable Securities then held by such Investor for each 30-day period or pro rata for any portion thereof following the Filing Deadline for which no Registration Statement is filed with respect to the Registrable Securities. Such payments shall constitute the Investors' exclusive monetary remedy for such events, but shall not affect the right of the Investors to seek injunctive relief. Such payments shall be made to each Investor in cash no later than five (5) Business Days after the end of each such 30-day period (the "Payment Date"). Interest shall accrue at the rate of 1% per month on any such liquidated damages payments that shall not be paid by the Payment Date until such amount is paid in full. Notwithstanding the foregoing, the Company will not be liable for any liquidated damages under this Section 2(a)(i) with respect to any Warrant Shares prior to the issuance.

(ii) The Company shall take reasonable efforts to register the Registrable Securities on Form S-3 if such form is available for use by the Company, provided that if at such time the Registration Statement is on Form S-1, the Company shall maintain the effectiveness of the Registration Statement then in effect until such time as a Registration Statement on Form S-3 covering the Registrable Securities has been declared effective by the SEC.

(b) Expenses. The Company will pay all expenses associated with each Registration Statement, including filing and printing fees, the Company's counsel and accounting fees and expenses, costs associated with clearing the Registrable Securities for sale under applicable state securities laws and listing fees, but excluding discounts, commissions, fees of underwriters, selling brokers, dealer managers or similar securities industry professionals with respect to the Registrable Securities being sold. Except as provided in Section 6 hereof, the Company shall not be responsible for legal fees incurred by holders of Registrable Securities in connection with the performance of its rights and obligations under the Transaction Documents.

(c) Effectiveness.

(i) The Company shall use commercially reasonable efforts to have the Registration Statements declared effective as soon as reasonably practicable after the filing thereof. The Company shall notify the Investors by facsimile or e-mail as promptly as practicable, and in any event, within forty-eight (48) hours, after any Registration Statement is declared effective and shall simultaneously provide the Investors with access to a copy of any related Prospectus to be used in connection with the sale or other disposition of the securities covered thereby. Subject to Section 2(d), if (A) a Registration Statement covering the Registrable Securities is not declared effective by the SEC prior to the earlier of (i) ten Business Days after the SEC informs the Company that no review of such Registration Statement will be made or that the SEC has no further comments on such Registration Statement and (ii) the 60th day after the Closing Date (or the 90th day if the SEC reviews such Registration Statement) (the "Effectiveness Deadline"), or (B) after a Registration Statement has been declared effective by the SEC, sales cannot be made pursuant to such Registration Statement for any reason (including without limitation by reason of a stop order, or the Company's failure to update such Registration Statement), but excluding any Allowed Delay (as defined below) or, if the Registration Statement is on Form S-1, for a period of twenty (20) days following the date on which the Company files a post-effective amendment to incorporate the Company's Annual Report on Form 10-K (a "Maintenance Failure"), then the Company will

make pro rata payments to each Investor then holding Registrable Securities, as liquidated damages and not as a penalty, in an amount equal to 1% of the aggregate amount paid pursuant to the Purchase Agreement by such Investor for such Registrable Securities then held by such Investor for each 30-day period or pro rata for any portion thereof following the date by which such Registration Statement should have been effective (the "Blackout Period"). Such payments shall constitute the Investors' exclusive monetary remedy for such events, but shall not affect the right of the Investors to seek injunctive relief. The amounts payable as liquidated damages pursuant to this paragraph shall be paid in cash no later than five (5) Business Days after each such 30-day period following the commencement of the Blackout Period until the termination of the Blackout Period (the "Blackout Period Payment Date"). Interest shall accrue at the rate of 1% per month on any such liquidated damages payments that shall not be paid by the Blackout Payment Date until such amount is paid in full. Notwithstanding the foregoing, the Company will not be liable for any liquidated damages under this Section 2(c)(i) with respect to any Warrant Shares prior to the issuance.

(ii) Notwithstanding anything to the contrary contained herein, (i) the Company shall not be required to file a Registration Statement (or any amendment thereto) or, if a Registration Statement has been filed but not declared effective by the SEC, request effectiveness of such Registration Statement, for a period of up to forty-five (45) days, if (A) the Company determines in good faith that a postponement is in the best interest of the Company and its stockholders generally due to a pending transaction involving the Company (including a pending securities offering by the Company, or any proposed financing, acquisition, merger, tender offer, business combination, corporate reorganization, consolidation or other significant transaction involving the Company), (B) the Company determines such registration would render the Company unable to comply with applicable securities laws, (C) the Company determines such registration would require disclosure of material information that the Company has a bona fide business purpose for preserving as confidential, or (D) audited financial statements as of a date other than the fiscal year end of the Company would be required to be prepared; and (ii) the Company may, upon written notice to any holder of Registrable Securities included in a Registration Statement, suspend the use of any Registration Statement, including any Prospectus that forms a part of a Registration Statement, if the Company (X) determines that it would be required to make disclosure of material information in the Registration Statement that the Company has a bona fide business purpose for preserving as confidential, (Y) the Company determines it must amend or supplement the Registration Statement or the related Prospectus so that such Registration Statement or Prospectus shall not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the case of the Prospectus in light of the circumstances under which they were made, not misleading or (Z) the Company has experienced or is experiencing some other material non-public event, including a pending transaction involving the Company, the disclosure of which at such time, in the good faith judgment of the Company, would adversely affect the Company; provided, however, in no event shall holders of Registrable Securities be suspended from selling Registrable Securities pursuant to the Registration Statement for a period that exceeds 30 consecutive Trading Days or 60 total Trading Days in any 180-day period (any such suspension contemplated by this Section 2(c)(ii), an "Allowed Delay"). Upon disclosure of such information or the termination of the condition described above, the Company shall provide prompt notice to holders whose Registrable Securities are included in the Registration Statement, and shall promptly terminate any suspension of sales it has put into effect and shall take such other reasonable actions to permit registered sales of Registrable Securities as contemplated hereby.

(d) Rule 415; Cutback. If at any time the SEC takes the position that the offering of some or all of the Registrable Securities in a Registration Statement is not eligible to be made on a delayed or continuous basis under the provisions of Rule 415 under the 1933 Act (provided, however, the Company shall be obligated to use commercially reasonable efforts to advocate with the SEC for the registration of all of the Registrable Securities in accordance with the SEC Guidance, including without limitation, Compliance and Disclosure Interpretation 612.09) or requires any Investor to be named as an "underwriter," the Company shall (i) promptly notify each holder of Registrable Securities thereof and (ii) make commercially reasonable efforts to persuade the SEC that the offering contemplated by such 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 Investors is an "underwriter." The Investors shall have the right to select one legal counsel designated by the Required Investors, at such Investors' expense, to review and oversee any registration or matters pursuant to this Section 2(d), including participation in any meetings or discussions with the SEC regarding the SEC's position and to comment on any written submission made to the SEC with respect thereto. No such written submission with respect to this matter shall be made to the SEC to which the Investors' counsel reasonably objects. In the event that, despite the Company's commercially reasonable efforts and compliance with the terms of this Section 2(d), the SEC refuses to alter its position, the Company shall (i) remove from such Registration Statement such portion of the Registrable Securities (the "Cut Back Shares") and/or (ii) agree to such restrictions and limitations on the registration and resale of the Registrable Securities as the SEC may require to assure the Company's compliance with the requirements of Rule 415 (collectively, the "SEC Restrictions"). Any cut-back imposed on the Investors pursuant to this Section 2(d) shall be allocated among the Investors on a pro rata basis and shall be applied first to any of the Registrable Securities of such Investor as such Investor shall designate, unless the SEC Restrictions otherwise require or provide or the Investors otherwise agree. 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 applicable to such Cut Back Shares (such date, the "Restriction Termination Date"). In furtherance of the foregoing, each Investor shall provide the Company with prompt written notice of its sale of substantially all of the Registrable Securities under such Registration Statement such that the Company will be able to file one or more additional Registration Statements covering the Cut Back Shares. From and after the Restriction Termination Date applicable to any Cut Back Shares, all of the provisions of this Section 2 (including the Company's obligations with respect to the filing of a Registration Statement and its obligations to use reasonable efforts to have such Registration Statement declared effective within the time periods set forth herein and the liquidated damages provisions relating thereto) shall again be applicable to such Cut Back Shares; provided, however, that (i) the Filing Deadline for such Registration Statement including such Cut Back Shares shall be ten (10) Business Days after such Restriction Termination Date, and (ii) the date by which the Company is required to obtain effectiveness with respect to such Cut Back Shares shall be the 60th day immediately after the Restriction Termination Date (or the 90th day if the SEC reviews such Registration Statement).

(e) Other Limitations. Notwithstanding any other provision herein or in the Purchase Agreement, (i) the Filing Deadline and each Effectiveness Deadline for a Registration Statement shall be extended and any Maintenance Failure shall be automatically waived by no action of the Investors, in each case, without default by or liquidated damages payable by the Company to an Investor hereunder in the event that the Company's failure to make such filing or obtain such effectiveness or a Maintenance Failure results from the failure of such Investor to timely provide the Company with information requested by the Company and necessary to complete a Registration Statement in accordance with the requirements of the 1933 Act (in which case any such deadline would be extended, and a Maintenance Failure waived, with respect to all Registrable Securities until such time as the Investor provides such requested information), it being understood that the failure of such Investor to timely provide such information to the Company shall not affect the rights of other Investors herein, and (ii) in no event shall the aggregate amount of liquidated damages (or interest thereon) paid under this Agreement to any Investor exceed, in the aggregate, 5% of the aggregate purchase price of the Securities purchased by such Investor under the Purchase Agreement.

3. Company Obligations. The Company will use commercially reasonable efforts to effect the registration of the Registrable Securities in accordance with the terms hereof, and pursuant thereto the Company will, as expeditiously as possible:

(a) use commercially reasonable efforts to cause such Registration Statement to become effective and to remain continuously effective until such time as there are no longer Registrable Securities held by the Investors (the "Effectiveness Period") and advise the Investors promptly in writing when the Effectiveness Period has expired;

(b) prepare and file with the SEC such amendments and post-effective amendments to such Registration Statement and the related Prospectus as may be necessary to keep such Registration Statement effective for the Effectiveness Period and to comply with the provisions of the 1933 Act and the 1934 Act with respect to the distribution of all of the Registrable Securities covered thereby;

(c) provide via email to the Investors who have supplied the Company with email addresses each Registration Statement and all amendments and supplements thereto not less than three (3) Trading Days prior to their filing with the SEC and reflect in each such document when so filed with the SEC such comments regarding the Investors and the plan of distribution as the Investors may reasonably and promptly propose no later than two (2) Trading Days after the Investors have been so furnished with copies of such documents as aforesaid;

(d) furnish to each Investor whose Registrable Securities are included in any Registration Statement (i) promptly after the same is prepared and filed with the SEC, if requested by such Investor, one (1) copy of any Registration Statement and any amendment thereto, each preliminary prospectus and Prospectus and each amendment or supplement thereto, and each letter written by or on behalf of the Company to the SEC or the staff of the SEC, and each item of correspondence from the SEC or the staff of the SEC, in each case relating to such Registration Statement (other than any portion of any thereof which contains information for which the

Company has sought confidential treatment), and (ii) such number of copies of a Prospectus, including a preliminary prospectus, and all amendments and supplements thereto and such other documents as each Investor may reasonably request in order to facilitate the disposition of the Registrable Securities owned by such Investor (it being understood and agreed that such documents, or access thereto, may be provided electronically);

(e) use commercially reasonable efforts to (i) prevent the issuance of any stop order or other suspension of effectiveness and, (ii) if such order is issued, obtain the withdrawal of any such order at the earliest possible moment;

(f) prior to any public offering of Registrable Securities, use reasonable best efforts to assist or cooperate with the Investors and their counsel in connection with their registration or qualification of such Registrable Securities for the offer and sale under the securities or blue sky laws of such jurisdictions reasonably requested by the Investors; provided, however, that the Company shall not be required in connection therewith or as a condition thereto to (i) qualify to do business in any jurisdiction where it would not otherwise be required to qualify but for this Section 3(f), (ii) subject itself to general taxation in any jurisdiction where it would not otherwise be so subject but for this Section 3(f), or (iii) file a general consent to service of process in any such jurisdiction;

(g) use commercially reasonable efforts to cause all Registrable Securities covered by a Registration Statement to be listed on The Nasdaq Global Market (or the primary securities exchange, interdealer quotation system or other market on which the Common Stock is then listed);

(h) promptly notify the Investors, at any time prior to the end of the Effectiveness Period, upon discovery that, or upon the happening of any event as a result of which, the Prospectus contains an untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary to make the statements therein not misleading in light of the circumstances then existing, and as promptly as reasonably practicable, prepare, file with the SEC and furnish to such holder a supplement to or an amendment of such Prospectus as may be necessary so that such Prospectus shall not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading in light of the circumstances then existing;

(i) otherwise use commercially reasonable efforts to comply with all applicable rules and regulations of the SEC under the 1933 Act and the 1934 Act, including, without limitation, Rule 172 under the 1933 Act, file any final Prospectus, including any supplement or amendment thereof, with the SEC pursuant to Rule 424 under the 1933 Act, promptly inform the Investors in writing if, at any time during the Effectiveness Period, the Company does not satisfy the conditions specified in Rule 172 and, as a result thereof, the Investors are required to deliver a Prospectus in connection with any disposition of Registrable Securities and take such other actions as may be reasonably necessary to facilitate the registration of the Registrable Securities hereunder; and

(j) with a view to making available to the Investors the benefits of Rule 144 (or its successor rule) and any other rule or regulation of the SEC that may at any time permit the Investors to sell shares of Common Stock to the public without registration, the Company covenants and agrees to: (i) make and keep public information available, as those terms are understood and defined in Rule 144, until the earlier of (A) six months after such date as all of the Registrable Securities may be sold without restriction by the holders thereof pursuant to Rule 144 or any other rule of similar effect or (B) such date as there are no longer Registrable Securities; (ii) file with the SEC in a timely manner all reports and other documents required of the Company under the 1934 Act; and (iii) furnish electronically to each Investor upon request, as long as such Investor owns any Registrable Securities, (A) a written statement by the Company that it has complied with the reporting requirements of the 1934 Act, (B) a copy of or electronic access to the Company's most recent Annual Report on Form 10-K or Quarterly Report on Form 10-Q, and (C) such other information as may be reasonably requested in order to avail such Investor of any rule or regulation of the SEC that permits the selling of any such Registrable Securities without registration.

4. Due Diligence Review; Information. If any Investor is required under applicable securities laws to be described in a Registration Statement as an "underwriter," the Company shall, upon reasonable prior notice, make available, during normal business hours, for inspection and review by the Investors, advisors to and representatives of the Investors (who may or may not be affiliated with the Investors and who are reasonably acceptable to the Company) (collectively, the "Inspectors"), all pertinent financial and other records, and all other corporate documents and properties of the Company (collectively, the "Records") as may be reasonably necessary for the purpose of such review, and cause the Company's officers, directors and employees, within a reasonable time period, to supply all such information reasonably requested by the Inspectors (including, without limitation, in response to all questions and other inquiries reasonably made or submitted by any of them), prior to and from time to time after the filing and effectiveness of such Registration Statement for the sole purpose of enabling such Investor and its accountants and attorneys to conduct such due diligence solely for the purpose of establishing a due diligence defense to underwriter liability under the 1933 Act; provided, however, that each Inspector shall agree to hold in strict confidence and shall not make any disclosure (except to such Investor) or use of any Record or other information which the Company determines in good faith to be confidential, and of which determination the Inspectors are so notified, unless (a) the disclosure of such Records is necessary to avoid or correct a misstatement or omission in any Registration Statement or is otherwise required under the 1933 Act, (b) the release of such Records is ordered pursuant to a final, non-appealable subpoena or order from a court or government body of competent jurisdiction, or (c) the information in such Records has been made generally available to the public other than by disclosure in violation of this Agreement or the Purchase Agreement. Each Investor agrees that it shall, upon learning that disclosure of such Records is sought in or by a court or governmental body of competent jurisdiction or through other means, give prompt notice to the Company and allow the Company, at its expense, to undertake appropriate action to prevent disclosure of, or to obtain a protective order for, the Records deemed confidential. Nothing herein (or in any other confidentiality agreement between the Company and any Investor) shall be deemed to limit the Investors' ability to sell Registrable Securities in a manner which is otherwise consistent with applicable laws and regulations.

Notwithstanding the foregoing, the Company shall not disclose material nonpublic information to the Investors, or to advisors to or representatives of the Investors, unless prior to disclosure of such information the Company identifies such information as being material nonpublic information and provides the Investors, such advisors and representatives with the opportunity to accept or refuse to accept such material nonpublic information for review and any Investor wishing to obtain such information enters into an appropriate confidentiality agreement with the Company with respect thereto.

5. Obligations of the Investors.

(a) Each Investor shall execute and deliver a Selling Stockholder Questionnaire prior to the Closing Date. Each Investor shall additionally furnish in writing to the Company such other information regarding itself, the Registrable Securities held by it and the intended method of disposition of the Registrable Securities held by it, as shall be reasonably required to effect the registration of such Registrable Securities and shall execute such documents in connection with such registration as the Company may reasonably request. At least seven (7) Business Days prior to the first anticipated filing date of any Registration Statement, the Company shall notify each Investor of the additional information the Company requires from such Investor if such Investor elects to have any of the Registrable Securities included in such Registration Statement (the "Registration Information Notice"). An Investor shall provide such information to the Company no later than five (5) Business Days following receipt of a Registration Information Notice if such Investor elects to have any of the Registrable Securities included in such Registration Statement. It is agreed and understood that it shall be a condition precedent to the obligations of the Company to complete the registration pursuant to this Agreement with respect to the Registrable Securities of a particular Investor that (i) such Investor furnish to the Company such information regarding itself, the Registrable Securities held by it and the intended method of disposition of the Registrable Securities held by it as shall be reasonably required to effect the effectiveness of the registration of such Registrable Securities, and (ii) such Investor execute such documents in connection with such registration as the Company may reasonably request, including, without limitation, a waiver of its registration rights hereunder to the extent an Investor elects not to have any of its Registrable Securities included in a Registration Statement.

(b) Each Investor, by its acceptance of the Registrable Securities, agrees to cooperate with the Company as reasonably requested by the Company in connection with the preparation and filing of a Registration Statement hereunder, unless such Investor has notified the Company in writing of its election to exclude all of its Registrable Securities from such Registration Statement.

(c) Each Investor agrees that, upon receipt of any notice from the Company of either (i) the commencement of an Allowed Delay pursuant to Section 2(c)(ii) or (ii) the happening of an event pursuant to Section 3(h) hereof, such Investor will immediately discontinue disposition of Registrable Securities pursuant to any Registration Statement covering such Registrable Securities, until the Investor is advised by the Company that such dispositions may again be made.

(d) Each Investor covenants and agrees that it will comply with the prospectus delivery requirements of the 1933 Act as applicable to it or an exemption therefrom in connection with sales of Registrable Securities pursuant to any Registration Statement.

6. Indemnification.

(a) Indemnification by the Company. The Company will indemnify and hold harmless each Investor and its officers, directors, members, managers, partners, trustees, employees and agents and other representatives, successors and assigns, and each other Person, if any, who controls such Investor (within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act) and the officers, directors, partners, members, managers, trustees and employees of each such controlling Person, against any losses, claims, damages or liabilities, joint or several, to which they may become subject under the 1933 Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement or omission or alleged omission of any material fact contained in any Registration Statement, any preliminary Prospectus or final Prospectus, or any amendment or supplement thereof; provided, however, that the Company will not be liable in any such case if and to the extent that any such loss, claim, damage or liability arises out of or is based upon (i) an untrue statement or alleged untrue statement or omission or alleged omission so made in conformity with information furnished by such Investor or any such controlling person in writing specifically for use in such Registration Statement or Prospectus, (ii) the use by an Investor of an outdated or defective Prospectus after the Company has notified such Investor in writing that such Prospectus is outdated or defective or (iii) an Investor's failure to send or give a copy of the Prospectus or supplement (as then amended or supplemented), if required (and not exempted) to the Persons asserting an untrue statement or omission or alleged untrue statement or omission at or prior to the written confirmation of the sale of Registrable Securities.

(b) Indemnification by the Investors. Each Investor agrees, severally but not jointly, to indemnify and hold harmless, to the fullest extent permitted by law, the Company, its directors, officers, employees, stockholders and each person who controls the Company (within the meaning of the 1933 Act) against any losses, claims, damages, liabilities and expense (including reasonable attorney fees) resulting from any untrue statement of a material fact or any omission of a material fact required to be stated in any Registration Statement or Prospectus or preliminary Prospectus or amendment or supplement thereto or necessary to make the statements therein not misleading, to the extent, but only to the extent, that such untrue statement or omission is contained in any information regarding such Investor and furnished in writing by such Investor to the Company specifically for inclusion in such Registration Statement or Prospectus or amendment or supplement thereto. In no event shall the liability of an Investor be greater than the dollar amount of the proceeds received by such Investor upon the sale of the Registrable Securities included in such Registration Statement giving rise to such indemnification obligation.

(c) Conduct of Indemnification Proceedings. Any person entitled to indemnification hereunder shall (i) give prompt notice to the indemnifying party of any claim with respect to which it seeks indemnification and (ii) permit such indemnifying party to assume the defense of such claim with counsel reasonably satisfactory to the indemnified party; provided, that

any person entitled to indemnification hereunder shall have the right to employ separate counsel and to participate in the defense of such claim, but the fees and expenses of such counsel shall be at the expense of such person unless (A) the indemnifying party has agreed to pay such fees or expenses, (B) the indemnifying party shall have failed to assume the defense of such claim and employ counsel reasonably satisfactory to such person or (C) in the reasonable judgment of any such person, based upon written advice of its counsel, a conflict of interest exists between such person and the indemnifying party with respect to such claims (in which case, if the person notifies the indemnifying party in writing that such person elects to employ separate counsel at the expense of the indemnifying party, the indemnifying party shall not have the right to assume the defense of such claim on behalf of such person); and provided, further that the failure of any indemnified party to give notice as provided herein shall not relieve the indemnifying party of its obligations hereunder, except to the extent that such failure to give notice shall materially adversely affect the indemnifying party in the defense of any such claim or litigation. It is understood that the indemnifying party shall not, in connection with any proceeding in the same jurisdiction, be liable for fees or expenses of more than one separate firm of attorneys at any time for all such indemnified parties. No indemnifying party will, except with the consent of the indemnified party, which shall not be unreasonably withheld or conditioned, consent to entry of any judgment or enter into any settlement that does not include as an unconditional term thereof the giving by the claimant or plaintiff to such indemnified party of a release from all liability in respect of such claim or litigation.

(d) Contribution. If for any reason the indemnification provided for in the preceding paragraphs (a) and (b) is unavailable to an indemnified party or insufficient to hold it harmless, other than as expressly specified therein, then the indemnifying party shall contribute to the amount paid or payable by the 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 indemnified party and the indemnifying party, as well as any other relevant equitable considerations. No person guilty of fraudulent misrepresentation within the meaning of Section 11(f) of the 1933 Act shall be entitled to contribution from any person not guilty of such fraudulent misrepresentation. In no event shall the contribution obligation of a holder of Registrable Securities be greater in amount than the dollar amount of the proceeds (net of all expenses paid by such holder in connection with any claim relating to this Section 6 and the amount of any damages such holder has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission) received by it upon the sale of the Registrable Securities giving rise to such contribution obligation.

7. Miscellaneous.

(a) Amendments and Waivers. This Agreement may be amended only by a writing signed by the Company and the Required Investors. 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 shall have obtained the written consent to such amendment, action or omission to act, of the Required Investors.

(b) Notices. All notices and other communications provided for or permitted hereunder shall be made as set forth in Section 9.4 of the Purchase Agreement.

(c) Assignments and Transfers by Investors. The provisions of this Agreement shall be binding upon and inure to the benefit of the Investors and their respective successors and permitted assigns. An Investor may transfer or assign, in whole or from time to time in part, to one or more persons its rights hereunder in connection with the transfer of Registrable Securities by such Investor to such person, provided that (i) the Investor agrees in writing with the transferee or assignee to assign such rights and a copy of such agreement is furnished to the Company within a reasonable time after such assignment; (ii) the Company is, within a reasonable time after such transfer or assignment, furnished with written notice of (A) the name and address of such transferee or assignee and (B) the securities with respect to which such registration rights are being transferred or assigned; (iii) immediately following such transfer or assignment the further disposition of such securities by the transferee or assignee is restricted under the 1933 Act or applicable state securities laws; (iv) at or before the time the Company receives the written notice contemplated by clause (ii) of this sentence the transferee or assignee agrees in writing with the Company to be bound by all of the provisions contained herein; (v) such transfer shall have been made in accordance with the applicable requirements of the Purchase Agreement and (vi) unless the transferee or assignee is an Affiliate of, and after such transfer or assignment continues to be an Affiliate of, such Investor, the amount of Registrable Securities transferred or assigned to such transferee or assignee represents at least $5.0 million of Registrable Securities (based on the then-current market price of the Common Stock).

(d) Assignments and Transfers by the Company. This Agreement may not be assigned by the Company (whether by operation of law or otherwise) without the prior written consent of the Required Investors, provided, however, that in the event that the Company is a party to a merger, consolidation, share exchange or similar business combination transaction in which the Common Stock is converted into the equity securities of another Person, from and after the effective time of such transaction, such Person shall, by virtue of such transaction, be deemed to have assumed the obligations of the Company hereunder, the term "Company" shall be deemed to refer to such Person and the term "Registrable Securities" shall be deemed to include the securities received by the Investors in connection with such transaction unless such securities are otherwise freely tradable by the Investors after giving effect to such transaction.

(e) Benefits of the Agreement. The terms and conditions of this Agreement shall inure to the benefit of and be binding upon the respective permitted successors and assigns of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and assigns any rights, remedies, obligations, or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement.

(f) Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via electronic mail (including pdf or any electronic signature complying with the U.S. ESIGN Act of 2000, *e.g.*, www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

(g) Titles and Subtitles. The titles and subtitles used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

(h) Severability. Any provision of this Agreement that is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof but shall be interpreted as if it were written so as to be enforceable to the maximum extent permitted by applicable law, and any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction. To the extent permitted by applicable law, the parties hereby waive any provision of law which renders any provisions hereof prohibited or unenforceable in any respect.

(i) Further Assurances. The parties shall execute and deliver all such further instruments and documents and take all such other actions as may reasonably be required to carry out the transactions contemplated hereby and to evidence the fulfillment of the agreements herein contained.

(j) Entire Agreement. This Agreement is intended by the parties as a final expression of their agreement and intended to be a complete and exclusive statement of the agreement and understanding of the parties hereto in respect of the subject matter contained herein. This Agreement supersedes all prior agreements and understandings between the parties with respect to such subject matter.

(k) Governing Law; Consent to Jurisdiction; Waiver of Jury Trial. This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of New York without regard to the choice of law principles thereof (other than sections 5-1401 and 5-1402 of the General Obligations Law). Each of the parties hereto irrevocably submits to the exclusive jurisdiction of the courts of the State of New York located in New York County and the United States District Court for the Southern District of New York for the purpose of any suit, action, proceeding or judgment relating to or arising out of this Agreement and the transactions contemplated hereby. Service of process in connection with any such suit, action or proceeding may be served on each party hereto anywhere in the world by the same methods as are specified for the giving of notices under this Agreement. Each of the parties hereto irrevocably consents to the jurisdiction of any such court in any such suit, action or proceeding and to the laying of venue in such court. Each party hereto irrevocably waives any objection to the laying of venue of any such suit, action or proceeding brought in such courts and irrevocably waives any claim that any such suit, action or proceeding brought in any such court has been brought in an inconvenient forum. To the extent that the Company has or hereafter may acquire any immunity (on the grounds of sovereignty or otherwise) from the jurisdiction of any court or from any legal process with respect to itself or its property, the Company irrevocably waives, to the fullest extent permitted by law, such immunity in respect of any such suit, action or proceeding. EACH OF THE PARTIES HERETO WAIVES ANY RIGHT TO REQUEST A TRIAL BY JURY IN ANY LITIGATION WITH RESPECT TO THIS AGREEMENT AND REPRESENTS THAT COUNSEL HAS BEEN CONSULTED SPECIFICALLY AS TO THIS WAIVER.

(l) Interpretation. Wherever required by the context of this Agreement, the singular shall include the plural and vice versa, and the masculine gender shall include the feminine and neuter genders and vice versa, and references to any agreement, document or instrument shall be deemed to refer to such agreement, document or instrument as amended, supplemented or modified from time to time. All article, section, paragraph or clause references not attributed to a particular document shall be references to such parts of this Agreement, and all exhibit, annex, letter and schedule references not attributed to a particular document shall be references to such exhibits, annexes, letters and schedules to this Agreement. In addition, the word "or" is not exclusive; the words "including," "includes," "included" and "include" are deemed to be followed by the words "without limitation"; and the terms "herein," "hereof" and "hereunder" and other words of similar import refer to this Agreement as a whole and not to any particular section, paragraph or subdivision.

(m) Independent Nature of Investors' Obligations and Rights. The obligations of each Investor hereunder are several and not joint with the obligations of any other Investor hereunder, and no Investor shall be responsible in any way for the performance of the obligations of any other Holder hereunder. Nothing contained herein or in any other agreement or document delivered at any closing, and no action taken by any Investor pursuant hereto or thereto, shall be deemed to constitute the Investors as a partnership, an association, a joint venture or any other kind of group or entity, or create a presumption that the Investors are in any way acting in concert or as a group or entity with respect to such obligations or the transactions contemplated by this Agreement or any other matters, and the Company acknowledges that the Investors are not acting in concert or as a group, and the Company shall not assert any such claim, with respect to such obligations or transactions. Each Investor shall be entitled to protect and enforce its rights, including without limitation the rights arising out of this Agreement, and it shall not be necessary for any other Investor to be joined as an additional party in any proceeding for such purpose. The use of a single agreement with respect to the obligations of the Company contained was solely in the control of the Company, not the action or decision of any Investor, and was done solely for the convenience of the Company and not because it was required or requested to do so by any Investor. It is expressly understood and agreed that each provision contained in this Agreement is between the Company and an Investor, solely, and not between the Company and the Investors collectively and not between and among Investors.

[remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

COMPANY:

LYRA THERAPEUTICS, INC.

By: /s/ Maria Palasis
Name: Maria Palasis, Ph.D.
Title: Chief Executive Officer

INVESTOR:

[*if signatory is an individual*]

Signature: _____
Name: _____

[*if signatory is an entity*]

Entity: Highmark Limited, in respect of its Segregated Account Highmark Long/Short Equity 20

Signature: /s/ Efrem Kamen
Name: Efrem Kamen
Title: Managing Member of Pura Vida Investments, LLC, in its capacity as investment manager to Investor

Entity: Lockheed Martin Corporation Master Retirement Trust

Signature: /s/ Efrem Kamen
Name: Efrem Kamen
Title: Managing Member of Pura Vida Investments, LLC, in its capacity as investment manager to Investor

Entity: Pura Vida Master Fund, Ltd.

Signature: /s/ Efrem Kamen
Name: Efrem Kamen
Title: Managing Member of Pura Vida Investments, LLC, in its capacity as investment manager to Investor

Entity: Pura Vida X Fund LP

Signature: /s/ Efrem Kamen
Name: Efrem Kamen
Title: Managing Member of Pura Vida Investments, LLC, in its capacity as investment manager to Investor

Entity: Walleye Manager Opportunities LLC

Signature: /s/ Efrem Kamen
Name: Efrem Kamen
Title: Managing Member of Pura Vida Investments, LLC, in its capacity as sub-adviser to Investor

Entity: Walleye Opportunities Master Fund Ltd

Signature: /s/ Efrem Kamen
Name: Efrem Kamen
Title: Managing Member of Pura Vida Investments, LLC, in its capacity as sub-adviser to Investor

Entity: Sea Hawk Multi-Strategy Master Fund Ltd

Signature: /s/ Efrem Kamen
Name: Efrem Kamen
Title: Managing Member of Pura Vida Investments, LLC, in its capacity as sub-adviser to Investor

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

By: /s/ Harlan Waksal
Harlan Waksal, M.D.

INVESTOR

MLPF&S CUSTODIAN FPO TIM FOSTER IRRA FBO TIM FOSTER

Signature: /s/ Tim Foster
Name: Tim Foster
Title: Authorized Signatory

INVESTOR:

[*if signatory is an individual*]

Signature: _____
Name: _____

[*if signatory is an entity*]

INVESTOR COMPANY ITF
ROSALIND MASTER FUND L.P.

Entity: _____

Signature: /s/ Steven Salamon
Name: Steven Salamon
Title: President, Rosalind Advisors, Inc. adviser to RMF

INVESTOR:

[*if signatory is an individual*]

Signature: _____
Name: _____

Entity: CVI Investments, Inc., By: Heights Capital Management, Inc., its authorized agent

Signature: /s/ Martin Kobinger
Name: Martin Kobinger
Title: President

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

By: /s/ Craig A. Wheeler
Craig A. Wheeler

INVESTOR:

[*if signatory is an individual*]

Signature: _____
Name: _____

[*if signatory is an entity*]

Entity: Soleus Capital Master Fund, L.P.
By: Soleus Capital, LLC, as general partner

Signature: /s/ Steven Musumeci
Name: Steven Musumeci
Title: Chief Operating Officer

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

By: /s/ Edward T. Anderson
Edward T. Anderson

INVESTOR:

[*if signatory is an individual*]

Signature: _____
Name: _____

[*if signatory is an entity*]

Entity: Armistice Capital Master Fund Ltd.

Signature: /s/ Steven Boyd
Name: Steven Boyd
Title: CIO of Armistice Capital, LLC, the Investment Manager

INVESTOR:

NANTAHALA CAPITAL PARTNERS SI, LP

By: Nantahala Capital Management, LLC
Its Investment Manager

By: /s/ Wilmot Harkey
Name: Wilmot Harkey
Title: Manager

INVESTOR:

NCP RFM LP

By: Nantahala Capital Management, LLC
Its Investment Manager

By: /s/ Wilmot Harkey
Name: Wilmot Harkey
Title: Manager

INVESTOR:

NCP CB LP

By: Nantahala Capital Management, LLC
Its Investment Manager

By: /s/ Wilmot Harkey
Name: Wilmot Harkey
Title: Manager

INVESTOR:

Pinehurst Partners, L.P., solely with respect to the portion of its assets for which Nantahala Capital Management, LLC acts as its Sub-Advisor

By: Nantahala Capital Management, LLC
Its Sub-Advisor

By: /s/ Wilmot Harkey
Name: Wilmot Harkey
Title: Manager

INVESTOR:

NANTAHALA CAPITAL PARTNERS LIMITED PARTNERSHIP

By: Nantahala Capital Management, LLC
Its General Partner

By: /s/ Wilmot Harkey
Name: Wilmot Harkey
Title: Manager

INVESTOR:

NANTAHALA CAPITAL PARTNERS II LIMITED PARTNERSHIP

By: Nantahala Capital Management, LLC
Its General Partner

By: /s/ Wilmot Harkey
Name: Wilmot Harkey
Title: Manager

INVESTOR:

Corbin Hedged Equity Fund, L.P., solely with respect to the portion of its assets for which Nantahala Capital Management, LLC acts as its Sub-Advisor

By: Nantahala Capital Management, LLC
Its Sub-Advisor

By: /s/ Wilmot Harkey
Name: Wilmot Harkey
Title: Manager

INVESTOR:

BLACKWELL PARTNERS LLC - SERIES A, solely with respect to the portion of its assets for which Nantahala Capital Management, LLC acts as its Investment Manager

By: Nantahala Capital Management, LLC
Its Investment Manager

By: /s/ Wilmot Harkey
Name: Wilmot Harkey
Title: Manager

INVESTOR:

[*if signatory is an individual*]

Signature: _____
Name: _____

[*if signatory is an entity*]

Entity: Samsara BioCapital, L.P.

Signature: /s/ Srinivas Akkaraju
Name: Srinivas Akkaraju, MD, PhD
Title: Managing Member

INVESTOR:

[*if signatory is an individual*]

Signature: _____
Name: _____

[*if signatory is an entity*]

Entity: Altium Growth Fund, LP

Signature: /s/ Mark Gottlieb
Name: Mark Gottlieb
Title: COO

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

VENROCK HEALTHCARE CAPITAL PARTNERS EG, L.P.

By: VHCP Management EG, LLC
Its: General Partner

By: /s/ Nimish Shah
Authorized Signatory

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

VENROCK HEALTHCARE CAPITAL PARTNERS III, L.P.

By: VHCP Management III, LLC
Its: General Partner

By: VR Advisor, LLC
Its: Manager

By: /s/ Nimish Shah
Authorized Signatory

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

VHCP CO-INVESTMENT HOLDINGS III, LLC

By: VHCP Management III, LLC
Its: Manager

By: VR Advisor, LLC
Its: Manager

By: /s/ Nimish Shah
Authorized Signatory

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

VENROCK HEALTHCARE CAPITAL PARTNERS II, L.P.

By: VHCP Management II, LLC
Its: General Partner

By: /s/ Nimish Shah
Authorized Signatory

IN WITNESS WHEREOF, the parties have executed this Agreement or caused their duly authorized officers to execute this Agreement as of the date first above written.

INVESTOR:

VHCP CO-INVESTMENT HOLDINGS II, LLC

By: VHCP Management II, LLC
Its: Manager

By: /s/ Nimish Shah
Authorized Signatory

Lyra Therapeutics Announces $100.5 Million Private Placement

WATERTOWN, Mass., April 8, 2022 – Lyra Therapeutics, Inc. (Nasdaq: LYRA), a clinical-stage therapeutics company leveraging its proprietary XTreo™ platform to enable precise, sustained and local delivery of medications to the ear, nose and throat (ENT) passages and other diseased tissues, today announced that it has entered into a securities purchase agreement to sell securities in a private placement that is expected to result in gross proceeds of approximately $100.5 million, before deducting offering expenses**.**

In the private placement, investors had the option to purchase either (a) shares of the Company's common stock at a price of $4.22 per share, or (b) in lieu thereof, pre-funded warrants to purchase shares of the Company's common stock, with an exercise price of $0.001 per share, at a purchase price of $4.219 per share (for aggregate consideration equating to $4.22 per share). Accordingly, pursuant to the securities purchase agreement, (i) certain investors agreed to purchase an aggregate of 18,815,159 shares of common stock at the purchase price described in the foregoing sentence and (ii) certain investors agreed to purchase pre-funded warrants to purchase an aggregate of 5,000,000 shares of common stock, with the exercise price and at the purchase, in each case, described in the foregoing sentence. Each pre-funded warrant will be exercisable immediately.

The closing of the offering is subject to certain conditions and is expected to occur on April 12, 2022.

The offer and sale of the foregoing securities are being made in a transaction not involving a public offering and the securities have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), or applicable state securities laws, and will be sold in a private placement pursuant to Regulation D of the Securities Act. The securities being issued in the private placement may not be offered or sold in the United States except pursuant to an effective registration statement or an applicable exemption from the registration requirements of the Securities Act and applicable state securities laws.

This press release shall not constitute an offer to sell or a solicitation of an offer to buy the foregoing securities, nor shall there be any sale of these securities in any state or other jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of any such state or other jurisdiction.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this press release that do not relate to matters of historical fact should be considered forward-looking statements, including statements regarding the closing of the private placement. These statements are neither promises nor guarantees, but involve known and unknown risks, uncertainties and other important factors that may cause the company's actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. The factors discussed under the caption "Risk Factors" in the company's Annual Report on Form 10-K filed with the SEC on March 9, 2022 and its other filings with the SEC could cause actual results to differ materially from those indicated by the forward-looking statements made in this press release. Any such

forward-looking statements represent management's estimates as of the date of this press release. While the company may elect to update such forward-looking statements at some point in the future, it disclaims any obligation to do so, even if subsequent events cause its views to change.

Contact Information:
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kathryn@theyatesnetwork.com