

**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 23, 2023**

APPLIED THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or Other Jurisdiction of
Incorporation)

001-38898
(Commission File Number)

81-3405262
(I.R.S. Employer Identification No.)

545 Fifth Avenue, Suite 1400
New York, NY 10017
(Address of Principal Executive Offices)

10017
(Zip Code)

Registrant's telephone number, including area code: **(212) 220-9226**

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

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

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	APLT	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.*Securities Purchase Agreement*

On April 23, 2023, Applied Therapeutics, Inc. (the “Company”) entered into a Securities Purchase Agreement (the “Securities Purchase Agreement”) for a private placement (the “Private Placement”) with a select group of accredited investors (collectively, the “Purchasers”). Pursuant to the Securities Purchase Agreement, the Purchasers have agreed to purchase 9,735,731 shares of the Company’s common stock, par value \$0.0001 per share (the “Shares”) at a purchase price of \$0.946 per share, and 22,000,000 pre-funded warrants to purchase common stock at a purchase price of \$0.945, which equals the purchase price per share of common stock less the \$0.001 per share exercise price of each pre-funded warrant (the “Pre-Funded Warrants” and together with the Shares the “Securities”). The Pre-Funded Warrants are immediately exercisable from the date of issuance and do not have an expiration date. Holders may not exercise any Pre-Funded Warrants that would cause the aggregate number of shares of common stock beneficially owned by the holder to exceed 9.99% of the Company’s outstanding common stock immediately after exercise. The Pre-Funded Warrants are subject to adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting the common stock and also upon any distributions for no consideration of assets to the Company’s stockholders. In the event of certain corporate transactions, the holders of the Pre-Funded Warrants will be entitled to receive, upon exercise of the Pre-Funded Warrants, the kind and amount of securities, cash or other property that the holders would have received had they exercised the Pre-Funded Warrants immediately prior to such transaction. The Pre-Funded Warrants do not entitle the holders thereof to any voting rights or any of the other rights or privileges to which holders of common stock are entitled.

The Private Placement is expected to occur on or about April 26, 2023, subject to the satisfaction of customary closing conditions. The Company anticipates receiving gross proceeds from the Private Placement of approximately \$30 million before deducting fees to the placement agent and other offering expenses payable by the Company. The Company intends to use the net proceeds to fund research and development and registration of its pipeline candidates, and for working capital and general corporate purposes.

The foregoing description of the Securities Purchase Agreement and Pre-Funded Warrants issued under the Purchase Agreement does not purport to be complete and is qualified in its entirety by references to the full text of (i) the Purchase Agreement, which is filed as Exhibit 10.1 to this Current Report on Form 8-K and is incorporated by reference herein and (ii) the form of Pre-Funded Warrant issued under the Purchase Agreement, a copy of which is attached to this report as Exhibit 4.1 and is incorporated by reference herein.

Registration Rights Agreement

In connection with the Private Placement, the Company also entered into a registration rights agreement, dated April 23, 2023 (the “Registration Rights Agreement”) with the Purchasers requiring the Company to register the resale of the Shares and the shares underlying the Pre-Funded Warrants. The Company is required to prepare and file a registration statement with the Securities and Exchange Commission (the “SEC”) as soon as reasonably practicable, but in no event later than 30 days following the closing of the Private Placement (the “Filing Deadline”), and to use commercially reasonable efforts to have the registration statement declared effective within 30 days of the Filing Deadline, subject to extension under the terms of the Registration Rights Agreement.

The Company has granted the Investors customary indemnification rights in connection with the Registration Rights Agreement. The Investors have also granted the Company customary indemnification rights in connection with the Registration Statement.

The foregoing description of the Registration Rights Agreement does not purport to be complete and is qualified in its entirety by references to the full text of such agreement, which is filed as Exhibit 10.2 to this Current Report on Form 8-K and is incorporated by reference herein.

Item 3.02. Unregistered Sales of Equity Securities.

The information contained above under Item 1.01, to the extent required by Item 3.02 of Form 8-K, is hereby incorporated by reference herein. Based in part upon the representations of the Purchasers in the Securities Purchase Agreement, the offering and sale of the Securities was made in reliance on the exemption afforded by Section 4(a)(2) of the Securities Act of 1933, as amended (the “Securities Act”) and Rule 506 of Regulation D under the Securities Act and corresponding provisions of state securities or “blue sky” laws. The Securities have not been registered under the Securities Act or any state securities laws and may not be offered or sold in the United States absent registration with the SEC or an applicable exemption from the registration requirements.

Neither this Current Report on Form 8-K nor any exhibit attached hereto is an offer to sell or the solicitation of an offer to buy shares of Common Stock or other securities of the Company

Item 7.01. Regulation FD Disclosure.

On April 24, 2023, the Company issued a press release announcing meaningful data from its govorestat (AT-007) in ACTION-Galactosemia Kids trial. The text of the press release is included as Exhibit 99.1 to this Form 8-K and is incorporated herein by reference.

In addition, on April 24, 2023, the Company made available a Corporate Presentation on the Investor Relations page of its website providing an update on its ACTION-Galactosemia Kids (AT-007-1002) clinical trial. A copy of the Corporate Presentation is attached hereto as Exhibit 99.2 to this Current Report on Form 8-K and is incorporated herein by reference. The Company does not undertake to update this presentation.

Item 8.01. Other Items.

On April 24, 2023, the Company issued a press release announcing its entry into the Securities Purchase Agreement with the Purchasers. The full text of the press release is attached as Exhibit 99.3 and is incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits:

Exhibit No.	Description
4.1	Form of Pre-Funded Common Stock Purchase Warrant
10.1	Securities Purchase Agreement, dated April 23, 2023, by and among the Company and the Purchasers.
10.2	Registration Rights Agreement, dated April 23, 2023, by and among the Company and the Purchasers.
99.1	Press Release for study results, dated April 24, 2023.
99.2	Corporate Presentation, April 2023
99.3	Press Release announcing offering, dated April 24, 2023.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

SIGNATURE

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.

APPLIED THERAPEUTICS, INC.

Dated: April 24, 2023

By: /s/ Shoshana Shendelman
Name: Shoshana Shendelman
Title: President and Chief Executive Officer

THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS. THE SECURITIES MAY NOT BE OFFERED FOR SALE, SOLD, TRANSFERRED OR ASSIGNED (I) IN THE ABSENCE OF (A) AN EFFECTIVE REGISTRATION STATEMENT FOR THE SECURITIES UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS OR (B) AN OPINION OF COUNSEL, IN A GENERALLY ACCEPTABLE FORM, THAT REGISTRATION IS NOT REQUIRED UNDER SAID ACT OR APPLICABLE STATE SECURITIES LAWS OR (II) UNLESS SOLD PURSUANT TO RULE 144 UNDER SAID ACT.

PRE-FUNDED COMMON STOCK PURCHASE WARRANT
Applied Therapeutics, Inc.

Warrant number: _____

Warrant Shares: _____

Issue Date: April 26, 2023

THIS PRE-FUNDED COMMON STOCK PURCHASE WARRANT (the "Warrant") certifies that, for value received, _____ or its assigns (the "Holder") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date hereof (the "Issue Date") and until this Warrant is exercised in full (the "Termination Date") but not thereafter, to subscribe for and purchase from Applied Therapeutics, Inc., a Delaware corporation (the "Company"), up to _____ shares (as subject to adjustment hereunder, the "Warrant Shares") of common stock, \$0.0001 par value per share, of the Company ("Common Stock"). The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b).

Section 1. Definitions. Capitalized terms used and not otherwise defined herein shall have the meanings set forth in that certain Securities Purchase Agreement (the "Securities Purchase Agreement"), dated April 23, 2023, between the Company and the Holder.

Section 2. Exercise.

a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Issue Date and on or before the Termination Date by delivery to the Company of a duly executed facsimile copy or PDF copy submitted by e-mail (or e-mail attachment) of the Notice of Exercise in the form annexed hereto (the "Notice of Exercise"). Within the earlier of (i) two (2) Trading Days (as defined below) and (ii) the number of Trading Days comprising the Standard Settlement Period (as defined in Section 2(d)(i) herein) following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the Warrant Shares specified in the applicable Notice of Exercise by wire transfer or cashier's check drawn on a United States bank unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Trading Days of the date on which the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Trading Day of its receipt of such notice. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

b) Exercise Price. The aggregate exercise price of this Warrant, except for a nominal exercise price of \$0.0001 per Warrant Share, was pre-funded to the Company on or prior to the Issue Date and, consequently, no additional consideration (other than the nominal exercise price of \$0.0001 per Warrant Share) shall be required to be paid by the Holder to any Person to effect any exercise of this Warrant. The Holder shall not be entitled to the return or refund of all, or any portion, of such pre-paid aggregate exercise price under any circumstance or for any reason whatsoever, including in the event this Warrant shall not have been exercised prior to the Termination Date. The remaining unpaid exercise price per share of Common Stock under this Warrant shall be \$0.001, subject to adjustment hereunder (the "Exercise Price").

c) Cashless Exercise. This Warrant may be exercised, in whole or in part, at any time by means of a “cashless exercise” in which the Holder shall be entitled to receive a number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

(A) = as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Trading Day prior to the opening of “regular trading hours” (as defined in Rule 600(b) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Common Stock on the principal Trading Market as reported by Bloomberg L.P. (“Bloomberg”) as of the time of the Holder’s execution of the applicable Notice of Exercise if such Notice of Exercise is executed during “regular trading hours” on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of “regular trading hours” on a Trading Day) pursuant to Section 2(a) hereof or (iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Trading Day and such Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of “regular trading hours” on such Trading Day;

(B) = the Exercise Price of this Warrant, as adjusted hereunder; and

(X) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

If Warrant Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the holding period of the Warrant Shares being issued may be tacked on to the holding period of this Warrant. The Company agrees not to take any position contrary to this Section 2(c).

“Bid Price” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the bid price of the Common Stock for the time in question (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg (based on a Trading Day from 9:30 a.m. (New York City time) to 4:00 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on The Pink Open Market (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 (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Buyers of a majority in interest of the Securities then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Trading Day” means a day on which the principal Trading Market is open for trading.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange, the OTCQB or the OTCQX (or any successors to any of the foregoing).

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported in The Pink Open Market (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 thereon, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Purchasers of a majority in interest of the Securities then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

d) Mechanics of Exercise.

i. Delivery of Warrant Shares Upon Exercise. The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder's or its designee's balance account with The Depository Trust Company through its Deposit or Withdrawal at Custodian system ("DWAC") if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by the Holder or (B) this Warrant is being exercised via cashless exercise, and otherwise by physical delivery of a certificate, registered in the Company's share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise by the date that is the earliest of (i) two (2) Trading Days after the delivery to the Company of the Notice of Exercise, (ii) one (1) Trading Day after delivery of the aggregate Exercise Price to the Company and (iii) the number of Trading Days comprising the Standard Settlement Period after the delivery to the Company of the Notice of Exercise (such date, the "Warrant Share Delivery Date"). Upon delivery of the Notice of Exercise to the Company, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares, *provided* that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period following delivery of the Notice of Exercise to the Company. If the Company fails for any reason to deliver to the Holder the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Notice of Exercise), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth Trading Day after the Warrant Share Delivery Date) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable. As used herein, "Standard Settlement Period" means the standard settlement period, expressed in a number of Trading Days, on the Company's primary Trading Market with respect to the Common Stock as in effect on the date of delivery of the Notice of Exercise to the Company.

ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

iii. Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.

iv. Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "Buy-In"), then the Company shall (A) pay in cash to the Holder the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue multiplied by (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or promptly deliver to the Holder the number of shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of shares of Common Stock with an aggregate sale price giving rise to such purchase obligation of \$10,000, under clause (A) of the immediately preceding sentence the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

v. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

vi. Charges, Taxes and Expenses. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; *provided, however*, that, in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.

vii. Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates (such Persons, "Attribution Parties")), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the Holder's submission of a Notice of Exercise to the Company shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and, absent manifest error, the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the SEC, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within one Trading Day confirm orally and in writing to the 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 this Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. As used herein, "Affiliate" shall mean any Person directly or indirectly controlled by, controlling or under common control with, a Holder, as such terms are used in and construed under Rule 405 under the Securities Act, but only for so long as such control shall continue. The "Beneficial Ownership Limitation" shall be 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. Notwithstanding the foregoing, in the case of a Holder who immediately prior to the Issue Date beneficially owns in excess of 9.99% of the number of shares of the Common Stock outstanding at such time, as calculated in accordance with Section 13(d) of the Exchange Act, the Beneficial Ownership Limitation shall be 19.99% of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

Section 3. Certain Adjustments.

a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock or any other equity or equity equivalent securities payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case the Warrant Shares shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately after such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately before such event, and the Exercise Price shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time the Company grants, issues or sells any rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (*provided, however*, that, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

c) Pro Rata Distributions. During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (*provided, however*, that, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

d) **Fundamental Transaction.** If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company (and all of its Subsidiaries, taken as a whole), directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is consummated pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of more than 50% of the outstanding Common Stock or more than 50% of the outstanding voting power of the common equity of the Company, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off, merger or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires more than 50% of the outstanding shares of Common Stock or more than 50% of the outstanding voting power of the common equity of the Company (each a “**Fundamental Transaction**”), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the “**Alternate Consideration**”) receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the “**Successor Entity**”) to assume in writing all of the obligations of the Company under this Warrant and the other Transaction Documents in accordance with the provisions of this Section 3(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant and the other Transaction Documents referring to the “Company” shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant and the other Transaction Documents with the same effect as if such Successor Entity had been named as the Company herein. Notwithstanding the foregoing, in the event of a Change of Control, that is approved by the Company's Board of Directors (and not for avoidance of doubt if the Change of Control is not within the Company's control), the Holder shall surrender this Warrant and shall be entitled to receive from the Company or any Successor Entity, as of the date of consummation of such Change of Control, the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of this Warrant, that is being offered and paid to the holders of Common Stock of the Company in connection with the Change of Control, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of Common Stock are given the choice to receive from among alternative forms of consideration in connection with the Change of Control. As used herein, “**Black Scholes Value**” means the value of this Warrant based on the Black-Scholes Option Pricing Model obtained from the “OV” function on Bloomberg determined as of the day immediately following the first public announcement of the applicable Change of Control, or, if the Change of Control is not publicly announced, the date the Change of Control is consummated, for pricing purposes and reflecting (i) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of this Warrant as of such date of request, (ii) an expected volatility equal to the lesser of (x) 100% and (y) the 30 day volatility obtained from the HVT function on Bloomberg as of the Trading Day immediately following the public announcement of the applicable Change of Control, (iii) the underlying price per share used in such calculation shall be the greater of (a) the highest VWAP during the five (5) Trading Days prior to the closing of the Change of Control and (b) the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Change of Control, (iv) a zero cost of borrow and (v) a 360 day annualization factor. As used herein, “**Change of Control**” means any Fundamental Transaction other than (i) any reorganization, recapitalization or reclassification of the Common Stock in which holders of the Company's voting power immediately prior to such reorganization, recapitalization or reclassification continue after such reorganization, recapitalization or reclassification to hold publicly traded securities and, directly or indirectly, are, in all material respects, the holders of the voting power of the surviving entity (or entities with the authority or voting power to elect the members of the board of directors (or their equivalent if other than a corporation) of such entity or entities) after such reorganization, recapitalization or reclassification, (ii) pursuant to a migratory merger effected solely for the purpose of changing the jurisdiction of incorporation of the Company or (iii) a merger in connection with a bona fide acquisition by the Company of any Person in which (x) the gross consideration paid, directly or indirectly, by the Company in such acquisition is not greater than 20% of the Company's market capitalization as calculated on the date of the consummation of such merger and (y) such merger does not contemplate a change to the identity of a majority of the board of directors of the Company. Notwithstanding anything herein to the contrary, any transaction or series of transactions that, directly or indirectly, results in the Company or the Successor Entity not having Common Stock or common stock, as applicable, registered under the 1934 Act and listed on an Eligible Market shall be deemed a Change of Control. As used herein, “**Eligible Market**” means The Nasdaq Capital Market, the NYSE American LLC, The Nasdaq Global Select Market, The Nasdaq Global Market or The New York Stock Exchange, Inc.

e) Calculations. All calculations under this Section 3 shall be made to the nearest one-hundredth of one cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

f) Voluntary Adjustment By Company. Subject to the rules and regulations of the Trading Market, the Company may at any time during the term of this Warrant, subject to the prior written consent of the Holder, reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the board of directors of the Company.

g) Notice to Holder.

i. Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly deliver to the Holder by facsimile or email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company (and all of its Subsidiaries, taken as a whole) is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by facsimile or email to the Holder at its last facsimile number or email address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; *provided* that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided in this Warrant constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the SEC pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 4. Transfer of Warrant.

a) Transferability. Subject to compliance with any applicable securities laws and the conditions set forth in Section 4(d) hereof and to the provisions of Section 2(m) of the Securities Purchase Agreement, this Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, if any, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within three (3) Trading Days of the date on which the Holder delivers an assignment form to the Company assigning this Warrant in full. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

b) New Warrants. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the original Issue Date and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

c) Warrant Register. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "Warrant Register"), in the name of the record Holder hereof from time to time. The Company shall deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

d) Transfer Restrictions. If, at the time of the surrender of this Warrant in connection with any transfer of this Warrant, the transfer of this Warrant shall not be either (i) registered pursuant to an effective registration statement under the Securities Act and under applicable state securities or blue sky laws or (ii) eligible for resale without volume or manner-of-sale restrictions or current public information requirements pursuant to Rule 144, the Company may require, as a condition of allowing such transfer, that the Holder or transferee of this Warrant, as the case may be, comply with the provisions of Section 8(g) of the Securities Purchase Agreement.

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

Section 5. Miscellaneous.

a) No Rights as Stockholder Until Exercise; No Settlement in Cash. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3. Without limiting any rights of a Holder to receive Warrant Shares on a "cashless exercise" pursuant to Section 2(c) or to receive cash payments pursuant to Section 2(d)(i) and Section 2(d)(iv) herein, in no event shall the Company be required to net cash settle an exercise of this Warrant.

b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Trading Day, then such action may be taken or such right may be exercised on the next succeeding Trading Day.

d) Authorized Shares.

The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

e) Jurisdiction. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be determined in accordance with the provisions of the Securities Purchase Agreement.

f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws and will bear a restrictive legend.

g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies. Without limiting any other provision of this Warrant or the Securities Purchase Agreement, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall promptly pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable external attorneys' fees of one counsel, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

h) Notices. Any notices, consents, waivers or other document or communications required or permitted to be given or delivered under the terms of this Warrant must be in writing and will be deemed to have been delivered: (i) upon receipt, if delivered personally; (ii) when sent, if sent by facsimile (*provided* confirmation of transmission is mechanically or electronically generated and kept on file by the sending party); (iii) when sent, if sent by e-mail (*provided* that such sent e-mail is kept on file (whether electronically or otherwise) by the sending party and the sending party does not receive an automatically generated message from the recipient's e-mail server that such e-mail could not be delivered to such recipient) and (iv) if sent by overnight courier service, one (1) Trading Day after deposit with an overnight courier service with next day delivery specified, in each case, properly addressed to the party to receive the same. If notice is given by facsimile or email, a copy of such notice shall be dispatched no later than the next business day by first class mail, postage prepaid. The addresses, facsimile numbers and e-mail addresses for such communications shall be:

If to the Company:

Applied Therapeutics, Inc.
545 Fifth Avenue, Suite 1400
New York, NY 10017
Attention: Shoshana Shendelman
President and Chief Executive Officer
Email: sshendelman@appliedtherapeutics.com

With a copy (for informational purposes only) to:

Skadden, Arps, Slate, Meagher & Flom LLP
One Manhattan West
New York, NY 10001
E-mail: michael.schwartz@skadden.com
Attention: Michael Schwartz

If to a Holder, to its address, facsimile number or e-mail address set forth herein or on the books and records of the Company.

Or, in each of the above instances, to such other address, facsimile number or e-mail address and/or to the attention of such other Person as the recipient party has specified by written notice given to each other party at least five (5) days prior to the effectiveness of such change. Written confirmation of receipt (A) given by the recipient of such notice, consent, waiver or other communication, (B) mechanically or electronically generated by the sender's facsimile machine containing the time, date and recipient facsimile number or (C) provided by an overnight courier service shall be rebuttable evidence of personal service, receipt by facsimile or receipt from an overnight courier service in accordance with clause (i), (ii) or (iv) above, respectively. A copy of the e-mail transmission containing the time, date and recipient e-mail address shall be rebuttable evidence of receipt by e-mail in accordance with clause (iii) above. Notwithstanding anything in this Warrant to the contrary, the Company shall not publicly disclose the name of Holder or any of its Affiliates, or include the name of Holder or any of its Affiliates in any press release or in any filing with the SEC or any regulatory agency or Trading Market, without the prior written consent of Holder, except (i) as required by the federal or state securities laws and (ii) to the extent such disclosure is required by law, rules or regulation of any applicable governmental authority or self regulatory organization (including Nasdaq or other stock exchange).

i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

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

l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.

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

n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

(Signature Page Follows)

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

APPLIED THERAPEUTICS, INC.

By: _____
Name: Shoshana Shendelman
Title: President and Chief Executive Officer

NOTICE OF EXERCISE

TO: Applied Therapeutics, Inc. (the "Company")

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

in lawful money of the United States; or

if permitted the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(3) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

The Warrant Shares shall be delivered to the following DWAC Account Number:

(4) Accredited Investors. The undersigned is an "accredited investor" as defined in Regulation D promulgated under the Securities Act of 1933, as amended.

By its delivery of this Notice of Exercise, the undersigned represents and warrants to the Company that in giving effect to the exercise evidenced hereby the Holders will not beneficially own in excess of the number of shares of Common Stock permitted to be owned under Section 2(e) of the Warrant to which this notice relates.

[SIGNATURE OF HOLDER]

Name of Investing Entity:

Signature of Authorized Signatory of Investing Entity:

Name of Authorized Signatory:

Title of Authorized Signatory:

Date:

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

ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name:

(Please Print)

Address:

(Please Print)

Phone Number:

Email Address:

Dated: _____, _____

Holder's Signature:

Holder's Address:

SECURITIES PURCHASE AGREEMENT

SECURITIES PURCHASE AGREEMENT (the "**Agreement**"), dated as of April 23, 2023, by and among Applied Therapeutics, Inc., a Delaware corporation, with headquarters located at 545 Fifth Avenue, Suite 1400, New York, NY 10017 (the "**Company**"), and the investors listed on the Schedule of Buyers attached hereto (individually, a "**Buyer**" and collectively, the "**Buyers**").

WHEREAS:

A. The Company and the Buyers are executing and delivering this Agreement in reliance upon the exemption from securities registration afforded by Rule 506(b) of Regulation D ("**Regulation D**") as promulgated by the United States Securities and Exchange Commission (the "**SEC**") under the Securities Act of 1933, as amended (the "**1933 Act**");

B. The Buyers, severally, and not jointly, wish to purchase from the Company, and the Company wishes to sell to the Buyers, upon the terms and conditions stated in this Agreement, (i) the number of shares (the "**Shares**") of the Company's common stock, par value \$0.0001 per share (the "**Common Stock**") and (ii) the number of pre-funded warrants (the "**Warrants**") set forth on the Schedule of Buyers hereto, respectively (as it may be amended or supplemented);

C. The Company has engaged SVB Securities LLC and UBS Securities LLC to act as placement agents (together, the "**Placement Agents**" and each, a "agent") for the offering of the Shares on a "best efforts" basis; and

D. Contemporaneously with the execution and delivery of this Agreement, the parties hereto are executing and delivering a Registration Rights Agreement, substantially in the form attached as Exhibit A (as the same may be amended, restated, modified or supplemented and in effect from time to time, the "**Registration Rights Agreement**"), pursuant to which the Company has agreed to provide certain registration rights in respect of the Shares and the shares of Common Stock issuable upon exercise of the Warrants, in the form of Exhibit B (the "**Warrant Shares**") under the 1933 Act and the rules and regulations promulgated thereunder, and applicable state securities laws. The Shares, Warrants and Warrant Shares are referred to herein, collectively, as the "**Securities**".

NOW THEREFORE, the Company and the Buyers hereby agree as follows:

1. PURCHASE AND SALE OF SHARES.

a. Purchase of the Shares and Warrants. Subject to the satisfaction (or waiver) of the conditions set forth in Sections 5 and 6 below, on the Closing Date (as defined in Section 1.b), the Company shall issue and sell to each Buyer, and each Buyer severally agrees to purchase from the Company, the number of Shares and Warrants set forth below such Buyer's name on its signature page hereto (the "**Closing**"). The purchase price of (i) the Shares at the Closing shall be equal to \$0.946 per Share (the "**Share Purchase Price**"), and (ii) the Warrants at the Closing shall be equal to \$0.945 per Warrant (the "**Pre-Funded Warrant Purchase Price**" and together with the Share Purchase Price the "**Purchase Price**").

b. The Closing Date. The date and time of the Closing (the "**Closing Date**") shall be 9:00 a.m., New York City time, on April 26, 2023 subject to the satisfaction (or waiver) of all of the conditions to the Closing set forth in Sections 5 and 6 (or such later or earlier date as is mutually agreed to in writing by the Company and the Required Buyers). The Closing shall occur on the Closing Date by telephonic conference and electronic exchange of documents. For purposes of this Agreement, "**Business Day**" means any day other than Saturday, Sunday or other day on which commercial banks in the City of New York are authorized or required by law to remain closed.

c. Form of Payment. On the Closing Date, (i) each Buyer shall pay the applicable Purchase Price to the Company for the Shares and the Warrants to be issued and sold to such Buyer on the Closing Date, by wire transfer of immediately available funds in accordance with the Company's written wire instructions, and (ii) the Company shall deliver to each Buyer a copy of the irrevocable instructions (the "**Transfer Instructions**") to Computershare Limited (the "**Transfer Agent**") instructing the Transfer Agent to issue to such Buyer or its designee(s), in book-entry form, a number of Shares and Warrants equal to the aggregate number of Shares and Warrants that such Buyer is purchasing on the Closing Date.

2. BUYER'S REPRESENTATIONS AND WARRANTIES.

Each Buyer represents and warrants, severally and not jointly, as of the date of this Agreement and the Closing Date, with respect to only itself, to the Company and the Placement Agents that:

a. Investment Purpose. Each Buyer understands that the Securities are "restricted securities" and have not been registered under the 1933 Act or any applicable state securities law and each such Buyer is acquiring the Securities hereunder as principal for its own account and not with a view towards, or for resale in connection with, the public sale or distribution, except pursuant to sales registered under, or exempted from, the registration requirements of the 1933 Act; *provided, however*, that by making the representations herein, such Buyer does not agree to hold any of the Securities for any minimum or other specific term and reserves the right to assign, transfer or otherwise dispose of any of the Securities at any time in accordance with or pursuant to an effective registration statement or an exemption under the 1933 Act.

b. Accredited Investor Status. Such Buyer is an "Institutional Accredited Investor" as that term is defined in Rule 501(a)(1), (2), (3) or (7) of Regulation D or a qualified institutional buyer as defined in Rule 144A(a) under the Securities Act and is acting for its own account (and not for the account of other) or as a fiduciary or agent for others (which others are also Institutional Accredited Investors).

c. Reliance on Exemptions. Such Buyer understands that the Securities are being offered and sold to it in reliance on specific exemptions from the registration requirements of the United States federal and state securities laws and that the Company is relying in part upon the truth and accuracy of, and such Buyer's compliance with, the representations, warranties, agreements, acknowledgments and understandings of such Buyer set forth herein in order to determine the availability of such exemptions.

d. Information. Such Buyer acknowledges that it has had the opportunity to review the Transaction Documents (including all exhibits and schedules thereto) and the SEC Documents (as defined below) and such Buyer and its advisors, if any, have been furnished with materials relating to the business, finances and operations of the Company and materials relating to the offer and sale of the Securities sufficient in its view to enable it to evaluate its investment. Such Buyer and its advisors, if any, have been afforded the opportunity to ask questions as it has deemed necessary of, and to receive answers from, representatives of the Company concerning the terms and conditions of the offering of the Securities and the merits and risks of investing in the Securities. Neither such inquiries nor any other due diligence investigations conducted by such Buyer or its advisors, if any, or its representatives shall modify, limit, amend or affect such Buyer's right to rely on the Company's representations and warranties contained in Section 3 below.

e. General Solicitation. Such Buyer is not purchasing the Securities as a result of any advertisement, article, notice or other communication regarding the Securities published in any newspaper, magazine or similar media or broadcast over television or radio or presented at any seminar or any other general advertisement.

f. Experience of Such Buyer. Such Buyer, either alone or together with its representatives, has such knowledge, sophistication and experience in business and financial matters so as to be capable of evaluating the merits and risks of the prospective investment in the Securities, and has so evaluated the merits and risks of such investment. Such Buyer is able to bear the economic risk of an investment in the Securities and, at the present time, is able to afford a complete loss of such investment.

g. Independent Investment Decision. Such Buyer has independently evaluated the merits of its decision to purchase Shares pursuant to the Transaction Documents (as defined below), and such Buyer confirms that it has not relied on the advice of any other Buyer's business and/or legal counsel in making such decision. Such Buyer understands that nothing in this Agreement or any other materials presented by or on behalf of the Company to the Buyer in connection with the purchase of the Securities constitutes legal, tax or investment advice. Such Buyer has consulted such legal, tax and investment advisors as it, in its sole discretion, has deemed necessary or appropriate in connection with its purchase of the Securities. Such Buyer understands that the Placement Agents have acted solely as the agents of the Company in this placement of the Securities and such Buyer has not relied on the business or legal advice of the Placement Agents or any of their agents, counsel or Affiliates (as defined below) in making its investment decision hereunder, and confirms that none of such Persons has made any representations or warranties to such Buyer in connection with the transactions contemplated by the Transaction Documents.

h. Acknowledgment of Risks. Such Buyer acknowledges and understands that its investment in the Securities involves a significant degree of risk, including, without limitation: (i) the Company may remain a development stage business with limited operating history and requires substantial funds in addition to the proceeds from the sale of the Securities; (ii) an investment in the Company is speculative, and only Buyers who can afford the loss of their entire investment should consider investing in the Company and the Securities; (iii) such Buyer may not be able to liquidate its investment; (iv) transferability of the Securities is extremely limited; (v) in the event of a disposition of the Securities, such Buyer could sustain the loss of its entire investment; (vi) the Company has not paid any dividends on its Common Stock since inception and does not anticipate the payment of dividends in the foreseeable future; (vii) the foregoing risks are more fully set forth in the SEC Documents; and (viii) that no United States federal or state agency or any other government or governmental agency has passed on or made any recommendation or endorsement of the Securities or the fairness or suitability of the investment in the Securities nor have such authorities passed upon or endorsed the merits of the offering of the Securities.

i. No Governmental Review. Such Buyer understands that no United States federal or state agency or any other government or governmental agency has passed on or made any recommendation or endorsement of the Securities or the fairness or suitability of the investment in the Securities nor have such authorities passed upon or endorsed the merits of the offering of the Securities.

j. Transfer or Resale. Such Buyer understands that, except as provided in the Registration Rights Agreement, (i) the Securities have not been and are not being registered under the 1933 Act or any state securities laws, and may not be offered for sale, sold, assigned or transferred unless (A) subsequently registered thereunder, (B) such Buyer shall have delivered to the Company an opinion of counsel, in a generally acceptable form, to the effect that such Securities to be sold, assigned or transferred may be sold, assigned or transferred pursuant to an exemption from such registration, or (C) such Buyer provides the Company with reasonable assurance that such Securities have been or can be sold, assigned or transferred pursuant to Rule 144 promulgated under the 1933 Act (or a successor rule thereto) ("**Rule 144**"); and (ii) neither the Company nor any other Person is under any obligation to register the Securities under the 1933 Act or any state securities laws or to comply with the terms and conditions of any exemption thereunder other than pursuant to the Registration Rights Agreement. As used in this Agreement, "**Person**" means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization or a government or any department or agency thereof or any other legal entity.

k. Brokers and Finders. Other than the Placement Agents, no Person (as defined below) will, to such Buyer's knowledge, have, as a result of the transactions contemplated by this Agreement, any valid right, interest or claim against or upon the Company or any other Buyer for any commission, fee or other compensation pursuant to any agreement, arrangement or understanding entered into by or on behalf of the Buyer. The purchase of Securities by such Buyer has not been solicited by or through anyone other than the Company or the Placement Agents.

l. Certain Trading Activities. Other than with respect to the transactions contemplated herein, since the time that such Buyer was first contacted by the Company, the Placement Agents or any other Person regarding the transactions contemplated hereby, neither the Buyer nor any Affiliate of such Buyer which (i) had knowledge of the transactions contemplated hereby, (ii) has or shares discretion relating to such Buyer's investments or trading or information concerning such Buyer's investments, including in respect of the Securities, and (iii) is subject to such Buyer's review or input concerning such Affiliate's investments or trading (each a "**Trading Affiliate**") has directly or indirectly, nor has any Person acting on behalf of such Buyer or Trading Affiliate, effected or agreed to effect any purchases or sales of the securities of the Company (including, without limitation, any short sales involving the Company's securities). Notwithstanding the foregoing, in the case of a Buyer and/or Trading Affiliate that is, individually or collectively, a multi-managed investment bank or vehicle whereby separate portfolio managers manage separate portions of such Buyer's or Trading Affiliate's assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of such Buyer's or Trading Affiliate's assets, the representation set forth above shall apply only with respect to the portion of assets managed by the portfolio manager that have knowledge about the financing transaction contemplated by this Agreement. 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.

m. Legends. Each such Buyer understands that the certificates or other instruments representing the Shares and the Warrants, except as set forth below, shall bear a restrictive legend in substantially the following form (the “**1933 Act Legend**”):

THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS. THE SECURITIES MAY NOT BE OFFERED FOR SALE, SOLD, TRANSFERRED OR ASSIGNED (I) IN THE ABSENCE OF (A) AN EFFECTIVE REGISTRATION STATEMENT FOR THE SECURITIES UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS OR (B) AN OPINION OF COUNSEL, IN A GENERALLY ACCEPTABLE FORM, THAT REGISTRATION IS NOT REQUIRED UNDER SAID ACT OR APPLICABLE STATE SECURITIES LAWS OR (II) UNLESS SOLD PURSUANT TO RULE 144 UNDER SAID ACT.

Each such Buyer further understands that the legends referenced above shall be removed, and the Company shall issue, pursuant to instructions provided by the Company to the Transfer Agent, a certificate or book-entry statement without such legend to the holder of the applicable Securities upon which it is stamped or issue to such holder by electronic delivery at the applicable balance account at the Depository Trust Company (“**DTC**”), only if (i) such Securities are registered for resale under the 1933 Act (provided that, if a Buyer is selling pursuant to the registration statement, such Buyer agrees to only sell such Securities during such time that the registration statement is effective and not withdrawn or suspended, and only as permitted by the registration statement), (ii) such Securities are sold or transferred pursuant to Rule 144 (if the transferor is not an Affiliate of the Company), or (iii) such Shares are eligible for sale under Rule 144, without the requirement for the Company to be in compliance with the current public information required under Rule 144 as to such securities and without volume or manner-of-sale restrictions.

n. Authorization, Enforcement, Validity. To the extent a Buyer is a corporation, partnership, limited liability company or other entity, such Buyer is a validly existing corporation, partnership, limited liability company or other entity and has the requisite corporate, partnership, limited liability or other organizational power and authority to enter into the transactions contemplated by the Transaction Documents. To the extent a Buyer is an individual, such Buyer has the legal capacity to enter into the transactions contemplated by the Transaction Documents. This Agreement and the Registration Rights Agreement have been duly and validly authorized (as applicable), executed and delivered on behalf of a Buyer and are legal, valid and binding agreements of such Buyer, enforceable against such Buyer in accordance with their respective terms, except as may be limited by bankruptcy, insolvency, reorganization, moratorium, fraudulent transfer, preference or similar laws affecting creditors’ rights generally and general principles of equity.

o. No Conflicts. The execution, delivery and performance by each such Buyer of the Transaction Documents and the consummation by Buyer of the transactions contemplated thereby will not (i) in the case that Buyer is a corporation, partnership, limited liability company or other entity, result in a violation of the organizational documents of Buyer, (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 Buyer 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 Buyer, 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 Buyer to perform its obligations hereunder.

p. Residency. Each such Buyer's residence (if an individual) or offices in which its investment decision with respect to the Securities was made (if an entity) are located at the address immediately below Buyer's name on its signature page.

q. Representations by Non-United States persons. If Buyer is not a United States person, the Buyer hereby represents that the Buyer has satisfied the laws of the Buyer's jurisdiction in connection with any invitation to subscribe for the Securities or any use of the Transaction Documents, including (i) the legal requirements within the Buyer's jurisdiction for the purchase of the Securities, (ii) any foreign exchange restrictions applicable to such purchase, (iii) any governmental or other consents that may need to be obtained and (iv) the income tax and other tax consequences, if any, that may be relevant to the purchase, holding, redemption, sale or transfer of the Securities. The Buyer's subscription and payment for, and the Buyer's continued beneficial ownership of, the Securities will not violate any applicable securities or other laws of the Buyer's jurisdiction.

r. No "Bad Actor" Disqualification Events. To Buyer's knowledge, neither (i) the Buyer, (ii) any of its directors, executive officers, other officers that may serve as a director or officer of any company in which it invests, general partners or managing members, nor (iii) any beneficial owner of the Company's voting equity securities (in accordance with Rule 506(d) of the Securities Act) held by the Buyer is subject to any Disqualification Event, except for Disqualification Events covered by Rule 506(d)(2)(ii) or (iii) or (d)(3) under the Securities Act and disclosed reasonably in advance of the Closing in writing in reasonable detail to the Company.

s. Anti-Money Laundering Laws. Such Buyer represents and warrants to, and covenants with, the Company that: (i) such Buyer is in compliance with the regulations administered by the U.S. Department of the Treasury ("Treasury") Office of Foreign Assets Control; (ii) such Buyer, its parents, subsidiaries, affiliated companies, officers, directors and partners, and to such Buyer's knowledge, its stockholders, owners, employees, and agents, are not on the List of Specially Designated Nationals and Blocked Persons maintained by Treasury and have not been designated by Treasury as a financial institution of primary money laundering concern subject to special measures under Section 311 of the USA PATRIOT Act, Pub. L. 107-56; (iii) to such Buyer's knowledge, the funds to be used to acquire the Securities are not derived from activities that contravene applicable anti-money laundering laws and regulations; (iv) such Buyer is in compliance in all material respects with applicable anti money laundering laws and regulations and has implemented anti money laundering procedures that are designed to comply with applicable anti-money laundering laws and regulations, including, as applicable, the requirements of the Bank Secrecy Act, as amended by the USA PATRIOT Act, Pub. L. 107-56; and (v) to the best of its knowledge none of the funds to be provided by such Buyer are being tendered on behalf of a person or entity who has not been identified to such Buyer.

3. REPRESENTATIONS AND WARRANTIES OF THE COMPANY

The Company represents and warrants, as of the date of this Agreement and the Closing Date to each of the Buyers and to the Placement Agents that:

a. Organization and Qualification. Except as disclosed in the SEC Documents, the Company does not directly or indirectly own any security or beneficial ownership interest, in any other Person (including through joint venture or partnership agreements) or have any interest in any other Person. Each of the Company and the Subsidiaries is a corporation and is duly organized under the laws of the jurisdiction in which it is incorporated and has the requisite corporate power and authority to own or lease, as the case may be, its properties, and to carry on its business as now being conducted. The Company is duly qualified to do business and is in good standing under the laws of each jurisdiction which requires such qualification, except to the extent that the failure to be so qualified or be in good standing would not be reasonably expected to have a Material Adverse Effect. As used in this Agreement, "**Material Adverse Effect**" means any material adverse effect on (i) the condition (financial or otherwise), prospects, earnings, business or properties of the Company and the Subsidiaries, taken as a whole, whether or not arising from transactions in the ordinary course of business or (ii) the ability of the Company to perform its obligations under the Transaction Documents. Except as disclosed in the SEC Documents, the Company holds all right, title and interest in and to 100% of the capital stock, equity or similar interests of each of the Subsidiaries, in each case, free and clear of any perfected security interest or any other Lien. For purposes of this Agreement, "**Lien**" means, with respect to any asset, any mortgage, lien, pledge, hypothecation, charge, security interest, encumbrance or adverse claim of any kind or any restrictive covenant, condition, restriction or exception of any kind that has the practical effect of creating a mortgage, lien, pledge, hypothecation, charge, security interest, encumbrance or adverse claim of any kind; and "**Subsidiary**" means any entity in which the Company, directly or indirectly, owns any of the outstanding capital stock, equity or similar interests or voting power of such entity at the time of this Agreement or at any time hereafter, whether directly or through any other Subsidiary. As of the date of this Agreement, the Company has no Subsidiaries.

b. Authorization; Enforcement; Validity. The Company has the requisite corporate power and authority to enter into and deliver each of this Agreement and the Registration Rights Agreement in connection with the transactions contemplated hereby and thereby (collectively, the “**Transaction Documents**”), and to issue and deliver the Securities in accordance with the terms hereof and of the other Transaction Documents. The execution and delivery of the Transaction Documents by the Company, and the consummation by the Company of the transactions contemplated hereby and thereby, including the issuance of the Shares and the Warrants and the reservation for issuance and the issuance of the Warrant Shares issuable upon exercise of the Warrants, have been duly authorized by the Board of Directors of the Company (the “**Company Board**”) and no further consent or authorization is required by the Company or its stockholders. This Agreement and the other Transaction Documents dated as of the date hereof have been duly executed and delivered by the Company, and constitute the legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, except as may be limited by bankruptcy, insolvency, reorganization, moratorium, fraudulent transfer, preference or similar laws affecting creditors' rights generally and general principles of equity. As of the Closing, the Transaction Documents dated after the date of this Agreement and on or prior to the date of the Closing shall have been duly executed and delivered by the Company and shall constitute the legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, except as may be limited by bankruptcy, insolvency, reorganization, moratorium, fraudulent transfer, preference or similar laws affecting creditors' rights generally and general principles of equity.

c. Capitalization. The authorized capital stock of the Company consists of (i) 200,000,000 shares of Common Stock, of which, as of April 12, 2023, 48,113,561 shares are issued and outstanding and 988,703 shares are currently outstanding and reserved for issuance pursuant to the Company's stock option, restricted stock and stock purchase plans, including, stock options representing 4,818,923 shares of Common Stock that have been granted to employees and are currently outstanding, and stock options representing 988,703 shares of Common Stock that are currently reserved, including 988,703 under the Company's 2019 Employee Stock Purchase Plan, and (ii) 10,000,000 shares of preferred stock, \$0.0001 par value, of which, as of April 12, 2023, zero shares are issued and outstanding. All of such outstanding or issuable shares of the Company have been, or upon issuance will be, validly issued and are, or upon issuance will be, fully paid and nonassessable. Except as disclosed in the SEC Documents (as defined below), and/or waived prior to the date hereof, (A) no shares of the capital stock of the Company are subject to preemptive rights or any other similar rights or any Liens suffered or permitted by the Company; (B) there are no outstanding options, warrants, scrip, rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities or rights convertible into or exchangeable or exercisable for, any shares of capital stock of the Company or any of the Subsidiaries, or contracts, commitments, understandings or arrangements by which the Company or any of the Subsidiaries is or may become bound to issue additional shares of capital stock of the Company or any of the Subsidiaries, or options, warrants or scrip for rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities or rights convertible into or exercisable or exchangeable for, any shares of capital stock of the Company or any of the Subsidiaries; (C) except as disclosed in the SEC Documents, there are no agreements or arrangements under which the Company or any of the Subsidiaries is obligated to register the sale of any of their securities under the 1933 Act (except the Registration Rights Agreement); (D) there are no outstanding securities or instruments of the Company or any of the Subsidiaries that contain any redemption or similar provisions, and there are no contracts, commitments, understandings or arrangements by which the Company or any of the Subsidiaries is or may become bound to redeem a security of the Company and no other stockholder or similar agreement to which the Company or any of the Subsidiaries is a party; (E) there are no securities or instruments containing anti-dilution or similar provisions that will or may be triggered by the issuance of the Shares; and (F) the Company does not have any stock appreciation rights or "phantom stock" plans or agreements or any similar plan or agreement.

d. Issuance of Securities. The Securities 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, except as disclosed in the SEC Documents and for restrictions on transfer set forth in the Transaction Documents or imposed by applicable securities laws. As of the Initial Closing, the Company shall have duly authorized and reserved for issuance a number of shares of Common Stock which equals the aggregate number of Warrant Shares. The Company shall, so long as any of the Warrants are outstanding, take all action necessary to reserve and keep available out of its authorized and unissued capital stock, solely for the purpose of effecting the exercise of the Warrants, 100% of the number of shares of Common Stock issuable upon exercise of the Warrants (subject to reduction from time to time for Common Stock issued upon exercise of the Warrants). Upon exercise in accordance with the Warrants, the Warrant Shares will be validly issued, fully paid and nonassessable and free from all taxes, liens and charges with respect to the issue thereof, with the holders being entitled to all rights accorded to a holder of Common Stock. The issuance by the Company of the Securities is in compliance with all applicable federal and state securities laws and, assuming the accuracy of the Buyers' representations and warranties set forth in Section 2, exempt from registration under the 1933 Act and applicable state securities laws.

e. No Conflicts.

(i) The execution and delivery of the Transaction Documents by the Company and, to the extent applicable, the Subsidiaries and the consummation by such parties of the transactions contemplated hereby and thereby (including, without limitation, the issuance of the Shares and the Warrants and reservation for issuance and issuance of the Warrant Shares) will not (A) result in a violation of the Company's Amended and Restated Certificate of Incorporation, as amended and as in effect on the date hereof (the "**Certificate of Incorporation**"), the Company's Amended and Restated Bylaws, as amended and as in effect on the date hereof (the "**Bylaws**") or any organizational documents of the Subsidiaries; (B) conflict with, or constitute a breach or default (or an event which, with the giving of notice or lapse of time or both, constitutes or would constitute a breach or default) under, or give to others any right of termination, amendment, acceleration or cancellation of, or other remedy with respect to, any agreement, indenture or instrument to which the Company or any of the Subsidiaries is a party; or (C) result in a violation of any law, rule, regulation, order, judgment or decree (including federal and state securities laws and regulations) applicable to the Company or any of the Subsidiaries or by which any property or asset of the Company or any of the Subsidiaries is bound or affected, except in the case of both (B) and (C) above, as would reasonably be expected to have a Material Adverse Effect. The execution and delivery by the Company of the Transaction Documents and the issuance and sale of the Securities contemplated thereby require no consent of, action by or in respect of, or filing with, any person, governmental body, agency, or official other than (a) filings that have been made pursuant to applicable state securities laws, (b) post-sale filings pursuant to applicable state and federal securities laws, (c) filings pursuant to the rules and regulations of any securities exchange on which the Securities may be listed and (d) filing of the registration statement required to be filed by the Registration Rights Agreement, each of which the Company has filed or undertakes to file within the applicable time. All consents, authorizations, orders, filings and registrations that the Company is or has been required to obtain as described in the preceding sentence have been obtained or effected on or prior to the date of this Agreement or shall be obtained or effected prior to the applicable due date thereafter, as provided by applicable law, this Agreement or otherwise.

(ii) Neither the Company nor any of the Subsidiaries has violated any material term of its Certificate of Incorporation, Bylaws or other organizational documents. Neither the Company nor any of the Subsidiaries has violated any material term of or has been in default under (or with the giving of notice or lapse of time or both would have been in violation of or default under) any contract, agreement, mortgage, indebtedness, indenture, instrument, judgment, decree or order or any statute, rule or regulation applicable to it, which violation or default would or would reasonably be expected to have a Material Adverse Effect. The business of the Company and/or the Subsidiaries has not been conducted in violation of any law, ordinance or regulation of any governmental entity, which violation would or would reasonably be expected to have a Material Adverse Effect.

f. SEC Documents; Financial Statements; Sarbanes-Oxley.

(i) Since January 1, 2020, the Company has filed all reports, schedules, forms, statements and other documents required to be filed by it with the SEC pursuant to the reporting requirements of the Securities Exchange Act of 1934 Act, as amended (the "**1934 Act**") (all of the foregoing filed prior to the date this representation is made (including all exhibits included therein and financial statements and schedules thereto and documents incorporated by reference therein), collectively being hereinafter referred to as the "**SEC Documents**"). The Company has made available to the Buyers or their respective representatives, or filed and made publicly available on the SEC's Electronic Data Gathering, Analysis, and Retrieval system (or successor thereto) ("**EDGAR**") no less than two (2) days prior to the date this representation is made, true and complete copies of the SEC Documents. Each of the SEC Documents was filed with the SEC within the time frames prescribed by the SEC for the filing of such SEC Documents such that each filing was timely filed with the SEC. As of their respective dates, the SEC Documents complied in all material respects with the requirements of the 1934 Act and the rules and regulations of the SEC promulgated thereunder applicable to the SEC Documents. None of the SEC Documents, at the time they were filed with the SEC, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. Since the filing of the SEC Documents, no event has occurred that would require an amendment or supplement to any of the SEC Documents and as to which such an amendment has not been filed and made publicly available on the SEC's EDGAR system no less than two (2) days prior to the date this representation is made. The Company has not received any written comments from the SEC staff that have not been resolved to the satisfaction of the SEC staff.

(ii) As of their respective dates, the consolidated financial statements of the Company and the Subsidiaries included in the SEC Documents complied as to form in all material respects with applicable accounting requirements and the published rules and regulations of the SEC with respect thereto. Such financial statements have been prepared in accordance with United States generally accepted accounting principles ("**GAAP**"), consistently applied, during the periods involved (except (i) as may be otherwise indicated in such financial statements or the notes thereto, or (ii) in the case of unaudited interim statements, to the extent they may exclude footnotes) and fairly present in all material respects the consolidated financial position of the Company and the Subsidiaries as of the dates thereof and the consolidated results of their operations and cash flows for the periods then ended (subject, in the case of unaudited statements for periods subsequent to December 31, 2022, to normal year-end audit adjustments). None of the Company, the Subsidiaries and their respective officers, directors and Affiliates or, to the Company's Knowledge (as defined below), any stockholder of the Company has made any filing with the SEC (other than the SEC Documents), issued any press release or made, distributed, paid for or approved (or engaged any other Person to make or distribute) any other public statement, report, advertisement or communication on behalf of the Company or any of the Subsidiaries that taken as a whole contains any untrue statement of a material fact or omits any statement of material fact necessary in order to make the statements therein, in the light of the circumstances under which they are or were made, not misleading or has provided any other information to the Buyers, including information referred to in Section 2.d, that contains any untrue statement of a material fact or, with respect to written information, omits to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they are or were made, not misleading. The Company is not required to file and will not be required to file any agreement, note, lease, mortgage, deed or other instrument entered into prior to the date this representation is made and to which the Company or any of the Subsidiaries is a party or by which the Company or any of the Subsidiaries is bound that has not been previously filed as an exhibit (including by way of incorporation by reference) to the Company's reports filed or made with the SEC under the 1934 Act. To the Company's Knowledge, the accounting firm that expressed its opinion with respect to the consolidated financial statements included in the Company's most recently filed Form 10-K, and reviewed the consolidated financial statements included in the Company's most recently filed quarterly report on Form 10-Q, was an independent registered public accounting firm pursuant to the standards set forth in Rule 2-01 of Regulation S-X promulgated by the SEC and as required by the applicable rules and guidance from the Public Company Accounting Oversight Board (United States), and such firm was otherwise qualified to render such opinion under applicable law and the rules and regulations of the SEC. There is no transaction, arrangement or other relationship between the Company and an unconsolidated or other off-balance-sheet entity that is required to be disclosed by the Company in its reports pursuant to the 1934 Act that has not been so disclosed in the SEC Documents.

(iii) The Company is in all material respects in compliance with applicable provisions of the Sarbanes-Oxley Act of 2002, as amended, and the rules and regulations thereunder (collectively, "Sarbanes-Oxley").

(iv) Since January 1, 2020, except as disclosed in the SEC Documents, to the Company's Knowledge, neither the Company nor any of the Subsidiaries nor, any director, officer or employee, of the Company or any of the Subsidiaries, has received or otherwise obtained any material complaint, allegation, assertion or claim, whether written or oral, regarding the accounting or auditing practices, procedures, methodologies or methods of the Company or any of the Subsidiaries or its internal accounting controls, including any complaint, allegation, assertion or claim that the Company or any of the Subsidiaries has engaged in questionable accounting or auditing practices. No attorney representing the Company or any of the Subsidiaries, whether or not employed by the Company or any of the Subsidiaries, has reported evidence of a material violation of securities laws, breach of fiduciary duty or similar violation by the Company or any of the Subsidiaries or any of their respective officers, directors, employees or agents to the Company Board or any committee thereof or to any director or officer of the Company pursuant to Section 307 of Sarbanes-Oxley, and the SEC's rules and regulations promulgated thereunder. Since January 1, 2020, there have been no internal or SEC investigations regarding accounting or revenue recognition discussed with, reviewed by or initiated at the direction of the chief executive officer, principal financial officer, the Company Board or any committee thereof. The Company is not, and never has been, a "shell company" (as defined in Rule 12b-2 under the 1934 Act).

(v) As used in this Agreement, the "**Company's Knowledge**" and similar language means, unless otherwise specified, the actual knowledge of any "officer" (as such term is defined in Rule 16a-1 under the 1934 Act) of the Company, including Shoshana Shendelman and Steven Ortega, and the knowledge any such Person would be expected to have after reasonable due diligence inquiry.

g. Internal Accounting Controls; Disclosure Controls and Procedures. The Company and each of its Subsidiaries maintain a system of internal accounting controls designed 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 generally accepted accounting principles in the United States 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 is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company and its Subsidiaries' internal controls over financial reporting are effective and the Company and its Subsidiaries are not aware of any material weakness in their internal controls over financial reporting. The Company and its Subsidiaries maintain "disclosure controls and procedures" (as such term is defined in Rule 13a-15(e) under the Securities and Exchange Act 1934, as amended, and the rules and regulations promulgated thereunder (the "**Exchange Act**"); and such disclosure controls and procedures are effective.

h. Absence of Certain Changes. The Company has not taken any steps to seek protection pursuant to any bankruptcy law nor, to the Company's Knowledge, do any creditors of the Company intend to initiate involuntary bankruptcy proceedings nor, to the Company's Knowledge, is there any fact that would reasonably lead a creditor to do so. The Company has not, since the date of the latest financial statements included within its SEC Documents, materially altered its method of accounting or the manner in which it keeps its books and records.

i. Absence of Litigation. Since January 1, 2020, except as disclosed in the SEC Documents, (i) there is no action, suit or proceeding, or, to the Company's Knowledge, any inquiry or investigation before or by any court, public board or other Governmental Authority (as defined below) pending or, to the Company's Knowledge, threatened against or affecting the Company, the Common Stock or any of the Subsidiaries, any Employee Benefit Plan (as defined below), or any of the Company's or the Subsidiaries' officers or directors in their capacities as such, as could reasonably be expected to have a Material Adverse Effect, and (ii) to the Company's Knowledge, none of the directors or officers of the Company has been involved (as a plaintiff, defendant, witness or otherwise) in securities-related litigation as could reasonably be expected to 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 under the Exchange Act or the 1933 Act.

j. Compliance with Healthcare Laws and Regulations. (i) Except as described in the SEC Documents, the preclinical and clinical studies conducted by or, to the knowledge of the Company, on behalf of or sponsored by the Company or its Subsidiaries, or in which the Company or its Subsidiaries have participated, that are described in the SEC Documents, or the results of which are referred to in the SEC Documents, were, and if still pending are, being conducted in all material respects in accordance with 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 of the U.S. Food and Drug Administration and comparable regulatory agencies outside of the United States to which they are subject, including the European Medicines Agency (collectively, the "**Regulatory Authorities**") and Good Clinical Practice and Good Laboratory Practice requirements; (ii) the descriptions in the SEC Documents of the results of such studies are accurate and complete descriptions in all material respects and fairly present the data derived therefrom; (iii) the Company has no knowledge of any other studies not described in SEC Documents, the results of which are inconsistent with or call into question the results described or referred to in the SEC Documents; (iv) the Company and its Subsidiaries have operated at all times and are currently in compliance in all material respects with all applicable statutes, rules and regulations of the Regulatory Authorities, except where such non-compliance would not, individually or in the aggregate, have a Material Adverse Effect; and (v) neither the Company nor any of its Subsidiaries, to the Company's knowledge, have received any written notices, correspondence or other communications from the Regulatory Authorities or any other governmental agency requiring or threatening the termination, material modification or suspension of any preclinical or clinical studies that are described in the SEC Documents or the results of which are referred to in the SEC Documents, other than ordinary course communications with respect to modifications in connection with the design and implementation of such studies, and, to the Company's knowledge, there are no reasonable grounds for the same. The Company has not failed to file with the Regulatory Authorities any required filing, declaration, listing, registration, report or submission with respect to the Company's product candidates that are described or referred to in the SEC Documents, except where such failure would not, individually or in the aggregate, have a Material Adverse Effect; all such filings, declarations, listings, registrations, reports or submissions were in material compliance with applicable laws when filed; and no deficiencies regarding compliance with applicable law have been asserted by any applicable regulatory authority with respect to any such filings, declarations, listings, registrations, reports or submissions.

k. Acknowledgment Regarding Buyer's Purchase of the Securities. The Company acknowledges and agrees that each of the Buyers is acting solely in the capacity of an arm's-length purchaser with respect to the Company in connection with the Transaction Documents and the transactions contemplated hereby and thereby. The Company further acknowledges that each Buyer is not acting as a financial advisor or fiduciary of the Company (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated hereby and thereby, and any advice given by any of the Buyers or any of their respective representatives or agents in connection with the Transaction Documents and the transactions contemplated hereby and thereby is merely incidental to such Buyer's purchase of the Shares Securities. The Company further represents to each Buyer that the Company's decision to enter into the Transaction Documents has been based solely on the independent evaluation by the Company and its representatives.

l. No Material Adverse Effect; No Undisclosed Liabilities. Since January 1, 2020, other than as disclosed in the SEC Documents, there has been no event, occurrence or development that has had or that could reasonably be expected to result in a Material Adverse Effect. Other than (i) the liabilities assumed or created pursuant to this Agreement and the other Transaction Documents, (ii) liabilities accrued for in the latest balance sheet included in the Company's most recent periodic report (on Form 10-Q or Form 10-K) (the date of such balance sheet, the "**Latest Balance Sheet Date**") and (iii) liabilities incurred in the ordinary course of business consistent with past practices since the Latest Balance Sheet Date, the Company and the Subsidiaries do not have any other liabilities (whether fixed or unfixed, known or unknown, absolute or contingent, asserted or unasserted, choate or inchoate, liquidated or unliquidated, or secured or unsecured, and regardless of when any action, claim, suit or proceeding with respect thereto is instituted).

m. General Solicitation. Neither the Company, nor any of its affiliates, nor any Person acting on its or their behalf, has engaged or will engage in any form of general solicitation or general advertising (within the meaning of Regulation D under the 1933 Act) in connection with the offer or sale of the Securities.

n. No Integrated Offering. Assuming the accuracy of the Buyers' representations and warranties set forth in Section 2, neither the Company, nor any of its affiliates, nor any Person acting on its or their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would require registration of any of the Securities under the 1933 Act or cause this offering of the Securities to be integrated with prior offerings by the Company for purposes of the 1933 Act or any applicable stockholder approval provisions of any authority.

o. Employee Relations. No labor problem or dispute with the employees of the Company or any of its Subsidiaries exists or, to the Company's knowledge, is threatened or imminent, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its or its Subsidiaries' principal suppliers, contractors or customers, that could have a Material Adverse Effect, except as set forth in or contemplated in the SEC Documents.

p. Employee Benefits. None of the following events has occurred or exists: (i) a failure to fulfill the obligations, if any, under the minimum funding standards of Section 302 of the United States Employee Retirement Income Security Act of 1974, as amended ("**ERISA**"), and the regulations and published interpretations thereunder with respect to a Plan (as defined below), determined without regard to any waiver of such obligations or extension of any amortization period that would reasonably be expected to have a Material Adverse Effect; (ii) an audit or investigation by the Internal Revenue Service, the U.S. Department of Labor, the Pension Benefit Guaranty Corporation or any other federal or state governmental agency or any foreign regulatory agency with respect to the employment or compensation of employees by any of the Company or any of its Subsidiaries that would reasonably be expected to have a Material Adverse Effect; (iii) any breach of any contractual obligation, or any violation of law or applicable qualification standards, with respect to the employment or compensation of employees by the Company or any of its Subsidiaries that would reasonably be expected to have a Material Adverse Effect. None of the following events has occurred or is reasonably likely to occur: (i) a material increase in the aggregate amount of contributions required to be made to all Plans in the current fiscal year of the Company and its Subsidiaries compared to the amount of such contributions made in the most recently completed fiscal year of the Company and its Subsidiaries; (ii) a material increase in the "accumulated post-retirement benefit obligations" (within the meaning of Statement of Financial Accounting Standards 106) of the Company and its Subsidiaries compared to the amount of such obligations in the most recently completed fiscal year of the Company and its Subsidiaries; (iii) any event or condition giving rise to a liability under Title IV of ERISA that could reasonably be expected to have a Material Adverse Effect; or (iv) the filing of a claim by one or more employees or former employees of the Company or any of its Subsidiaries related to their employment that would reasonably be expected to have a Material Adverse Effect. For purposes of this paragraph, the term "**Plan**" means a plan (within the meaning of Section 3(3) of ERISA) subject to Title IV of ERISA with respect to which the Company or any of its Subsidiaries may have any liability.

q. Intellectual Property Rights.

(i) Except as disclosed in the SEC Documents, and as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, (i) the Company and its Subsidiaries own, possess, or have valid and enforceable licenses or other rights to use, on reasonable terms, all patents, trademarks, service marks, trade names, copyrights, inventions, trade secrets, know-how and other intellectual property (including all registrations and applications for registration of, and all goodwill associated with, the foregoing) (collectively, the "**Intellectual Property**") that is used or held for use in or, to the Company's knowledge, is necessary for the conduct of the business of the Company and its Subsidiaries as now conducted or as proposed in the SEC Documents to be conducted; (ii) to the Company's knowledge, no third party has infringed, misappropriated or otherwise violated any Intellectual Property owned by or exclusively licensed to the Company or its Subsidiaries; (iii) to the Company's knowledge, (A) neither the Company nor any of its Subsidiaries has infringed, misappropriated or otherwise violated any Intellectual Property of any third party and (B) none of the product candidates of the Company or any of its Subsidiaries, if commercially sold or offered for commercial sale, would infringe, misappropriate or otherwise violate any Intellectual Property of any third party; (iv) to the Company's knowledge, all Intellectual Property owned by or exclusively licensed to the Company or its Subsidiaries is valid and enforceable; (v) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by any third party: (A) challenging any of the Company's or any of its Subsidiaries' rights in or to any Intellectual Property owned by or exclusively licensed to the Company or any of its Subsidiaries; (B) challenging the inventorship, validity, enforceability or scope of any Intellectual Property owned by or exclusively licensed to the Company or any of its Subsidiaries; or (C) alleging that the Company or any of its Subsidiaries has infringed, misappropriated or otherwise violated, or would, upon the commercial sale or offer for commercial sale of any product candidate of the Company or any of its Subsidiaries, infringe, misappropriate, or otherwise violate, any Intellectual Property of any third party; and (vi) the Company and its Subsidiaries have taken reasonable steps to maintain the confidentiality of all Intellectual Property, the value of which to the Company or any of its Subsidiaries is contingent upon maintaining the confidentiality thereof.

(ii) Except as may be included or incorporated by reference in the SEC Documents, (x) to the Company's knowledge, there has been no material security breach or other material compromise of or relating to any of the Company's or its Subsidiaries' information technology and computer systems, networks, hardware, software, data (including the data of their respective customers, employees, suppliers, vendors and any third party data maintained by or on behalf of them), equipment or technology (collectively, "**IT Systems and Data**") and (y) the Company and its Subsidiaries have not been notified of, and have no knowledge of any event or condition that would reasonably be expected to result in, any material security breach or other material compromise to their IT Systems and Data; (ii) the Company and its Subsidiaries are presently in compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Data and to the protection of such IT Systems and Data from unauthorized use, access, misappropriation or modification, except as would not, in the case of this clause (ii), individually or in the aggregate, have a Material Adverse Effect; and (iii) the Company and its Subsidiaries have implemented backup and disaster recovery technology consistent with industry standards and practices. The statements contained in the SEC Documents insofar as such statements summarize legal matters, agreements, documents, or proceedings discussed therein, are accurate and fair summaries of such legal matters, agreements, documents or proceedings.

r. **Environmental Laws.** The Company and its Subsidiaries (i) are in compliance with any and all applicable foreign, federal, state and local laws and regulations relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants ("**Environmental Laws**"), (ii) have received and are in compliance with all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses and (iii) have not received notice of any actual or potential liability under any environmental law, except where such non-compliance with Environmental Laws, failure to receive required permits, licenses or other approvals or liability would not reasonably be expected, individually or in the aggregate, have a Material Adverse Effect, except as set forth in or contemplated in the SEC Documents (exclusive of any amendment or supplement thereto). Except as set forth in the SEC Documents, neither the Company nor any of the Subsidiaries has been named as a "potentially responsible party" under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended. In the ordinary course of its business, the Company periodically reviews the effect of Environmental Laws on the business, operations and properties of the Company and its Subsidiaries, in the course of which it identifies and evaluates associated costs and liabilities (including, without limitation, any capital or operating expenditures required for clean-up, closure of properties or compliance with Environmental Laws, or any permit, license or approval, any related constraints on operating activities and any potential liabilities to third parties). On the basis of such review, the Company has reasonably concluded that such associated costs and liabilities would not, individually or in the aggregate, have a Material Adverse Effect, except as set forth in or contemplated in the SEC Documents.

s. **Real Property.** Each of the Company and each of its Subsidiaries owns or leases all such properties as are necessary to the conduct of its operations as presently conducted, except as would not reasonably be expected to have a Material Adverse Effect.

t. **Insurance.** The Company and each of its Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as the Company reasonably believes are prudent and customary in the businesses in which they are engaged; all policies of insurance and fidelity or surety bonds insuring the Company or any of its Subsidiaries or their respective businesses, assets, employees, officers and directors are in full force and effect; the Company and its Subsidiaries are in compliance with the terms of such policies and instruments in all material respects; and there are no material claims by the Company or any of its Subsidiaries under any such policy or instrument as to which any insurance company is denying liability or defending under a reservation of rights clause; neither the Company nor any such Subsidiary has been refused any insurance coverage sought or applied for; and neither the Company nor any such Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not have reasonably be expected to have a Material Adverse Effect, except as set forth in or contemplated in the SEC Documents.

u. Regulatory Permits and Other Regulatory Matters. The Company and its Subsidiaries possess all licenses, certificates, permits and other authorizations required to be issued by all applicable authorities necessary to conduct their respective businesses, except for any such failure to possess as would not reasonably be expected to have a Material Adverse Effect; and neither the Company nor any such Subsidiary has received any notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit which, individually or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a Material Adverse Effect, except as set forth in or contemplated in the SEC Documents.

v. Listing. The Common Stock is registered pursuant to Section 12(b) or 12(g) of the 1934 Act, and the Company has taken no action designed to, or which to its knowledge is likely to have the effect of, terminating the registration of the Common Stock under the 1934 Act nor has the Company received any notification that the SEC is contemplating terminating such registration. Other than as disclosed in the SEC Documents, the Company has not, in the 12 months preceding the date hereof, received notice from the Nasdaq Stock Market that the Company is not in compliance with the listing or maintenance requirements of the Nasdaq Global Market (the "Principal Market"). Other than as disclosed in the SEC Documents, the Company is as of the date hereof, will be as of the date of the issuance of Shares pursuant to the Transaction Documents (after giving effect to the consummation of the transactions contemplated by the Transaction Documents), and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with all such listing and maintenance requirements. With respect to the Company's non-compliance with the requirements for continued listing on the Nasdaq Global Market, including with respect to the Company's bid price and stockholders' equity, the Company reasonably believes that it will regain compliance in advance of the expiry of the relevant 180-day grace period extended by the Nasdaq Global Market. The Common Stock is eligible for clearing through DTC, through its Deposit/Withdrawal At Custodian (DWAC) system, and the Company is eligible and participating in the Direct Registration System (DRS) of DTC with respect to the Common Stock.

w. Tax Status. The Company has filed all tax returns that are required to be filed or has requested extensions thereof (except (i) in any case where such failure to file would not reasonably be expected to have a Material Adverse Effect or (ii) as set forth in or contemplated in the SEC Documents) and has paid all taxes required to be paid by it and any other assessment, fine or penalty levied against it, to the extent that any of the foregoing is due and payable, except (i) where any such failure to pay, assessment, fine or penalty is currently being contested in good faith or would not reasonably be expected to have a Material Adverse Effect or (ii) as set forth in or contemplated in the SEC Documents.

x. Transactions With Affiliates. Except as set forth in the SEC Documents, to the Company's knowledge, none of any Subsidiary's officers or directors, Persons who were officers or directors of the Company or any Subsidiary at any time during the previous two years, stockholders, or affiliates of the Company or any of the Subsidiaries, or with any individual related by blood, marriage or adoption to any such individual (each a "**Related Party**"), is presently, or has been within the past two years, a party to any transaction, contract, agreement, instrument, commitment, understanding or other arrangement or relationship with the Company or any of the Subsidiaries (other than directly for services as an employee, officer and/or director), whether for the furnishing of services to or by, providing for rental of real or personal property to or from, or otherwise requiring payments or consideration to or from any such Related Party, in each case in excess of \$120,000. Except as set forth in the SEC Documents, no Related Party of the Company or any of the Subsidiaries or any of their respective Affiliates, has any direct or indirect ownership interest in any Person (other than ownership of less than 1% of the outstanding common stock of a publicly traded corporation) in which the Company or any of the Subsidiaries has any direct or indirect ownership interest or has a business relationship or with which the Company or any of the Subsidiaries competes. "**Affiliate**" for purposes hereof means, with respect to any Person, another Person that, (i) is a director, officer, manager, managing member, general partner or five percent or greater owner of equity interests in such Person, or (ii) directly or indirectly, (1) has a common ownership with that Person, (2) controls that Person, (3) is controlled by that Person or (4) shares common control with that Person. "**Control**" or "**controls**" for purposes hereof means that a person or entity has the power, direct or indirect, to conduct or govern the policies of another Person.

y. Application of Takeover Protections. The Company and the Company Board have taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination or other similar anti-takeover provision under the Certificate of Incorporation or the laws of the State of Delaware that is or could reasonably be expected to become applicable to the Buyers as a result of the transactions contemplated by this Agreement, including the Company's issuance of the Shares and the Buyers' ownership of the Securities.

z. Rights Agreement. The Company has not adopted a stockholder rights plan (or "poison pill") or similar arrangement relating to accumulations of beneficial ownership of Common Stock or a change in control of the Company.

aa. Foreign Corrupt Practices and Certain Other Federal Regulations.

(i) Neither the Company nor any of its Subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee, affiliate or other person acting on behalf of the Company or any of its Subsidiaries is aware of or has taken any action, directly or indirectly, that could result in a violation or a sanction for violation by such persons of the Foreign Corrupt Practices Act of 1977 or the U.K. Bribery Act 2010, each as may be amended, or similar law of any other relevant jurisdiction, or the rules or regulations thereunder to which the Company, its Subsidiaries and its controlled affiliates are subject; and the Company and its Subsidiaries have instituted and maintain policies and procedures designed to ensure compliance therewith. No part of the proceeds of the offering will be used, directly or indirectly, in violation of the Foreign Corrupt Practices Act of 1977 or the U.K. Bribery Act 2010, each as may be amended, or similar law of any other relevant jurisdiction, or the rules or regulations thereunder.

(ii) The operations of the Company and its Subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements and the money laundering statutes and the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "**Money Laundering Laws**") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its Subsidiaries with respect to the Money Laundering Laws is pending or, to the best knowledge of the Company, threatened.

(iii) Neither the Company nor any of its Subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee or affiliate of the Company or any of its Subsidiaries (i) is, or is controlled or 50% or more owned in the aggregate by or is acting on behalf of, one or more individuals or entities that are currently the subject of any sanctions administered or enforced by the United States (including any administered or enforced by the Office of Foreign Assets Control of the U.S. Department of the Treasury, the U.S. Department of State or the Bureau of Industry and Security of the U.S. Department of Commerce), the United Nations Security Council, the European Union, a member state of the European Union (including sanctions administered or enforced by Her Majesty's Treasury of the United Kingdom) or other relevant sanctions authority (collectively, "**Sanctions**" and such persons, "**Sanctioned Persons**" and each such person, a "**Sanctioned Person**"), (ii) is located, organized or resident in a country or territory that is, or whose government is, the subject of Sanctions that broadly prohibit dealings with that country or territory (collectively, "**Sanctioned Countries**" and each, a "**Sanctioned Country**") or (iii) will, directly or indirectly, use the proceeds of this offering, or lend, contribute or otherwise make available such proceeds to any Subsidiary, joint venture partner or other individual or entity in any manner that would result in a violation of any Sanctions by, or could result in the imposition of Sanctions against, any individual or entity (including any individual or entity participating in the offering, whether as underwriter, advisor, investor or otherwise).

(iv) Neither the Company nor any of its Subsidiaries has engaged in any dealings or transactions with or for the benefit of a Sanctioned Person, or with or in a Sanctioned Country, in the preceding three years, nor does the Company or any of its Subsidiaries have any plans to engage in dealings or transactions with or for the benefit of a Sanctioned Person, or with or in a Sanctioned Country.

bb. No Other Agreements. The Company has not, directly or indirectly, made any agreements with any Buyers relating to the terms or conditions of the transactions contemplated by the Transaction Documents except as set forth in the Transaction Documents.

cc. Investment Company. The Company is not, and upon the Closing will not be, an "investment company" as such term is defined in the Investment Company Act of 1940, as amended.

dd. No Disqualification Events. With respect to the Securities to be offered and sold hereunder in reliance on Rule 506 under the 1933 Act, none of the Company, any of its predecessors, any director, executive officer, other officer of the Company participating in the offering contemplated hereby, any beneficial owner (as that term is defined in Rule 13d-3 under the 1934 Act) of 20% or more of the Company's outstanding voting equity securities, calculated on the basis of voting power, any "promoter" (as that term is defined in Rule 405 under the 1933 Act) connected with the Company in any capacity at the time of the Closing, any placement agent or dealer participating in the offering of the Securities and any of such agents' or dealer's directors, executive officers, other officers participating in the offering of the Securities (each, a "**Covered Person**" and, together, "**Covered Persons**") is subject to any of the "Bad Actor" disqualifications described in Rule 506(d)(1)(i) to (viii) under the 1933 Act (a "**Disqualification Event**"). The Company has exercised reasonable care to determine (i) the identity of each person that is a Covered Person; and (ii) whether any Covered Person is subject to a Disqualification Event. The Company has complied, to the extent applicable, with its disclosure obligations under Rule 506(e). With respect to each Covered Person, the Company has established procedures reasonably designed to ensure that the Company receives notice from each such Covered Person of (x) any Disqualification Event relating to that Covered Person, and (y) any event that would, with the passage of time, become a Disqualification Event relating to that Covered Person; in each case occurring up to and including the Closing Date. Assuming the accuracy of the Buyers' representations and warranties set forth in Section 2, the Company is not for any other reason disqualified from reliance upon Rule 506 of Regulation D for purposes of the offer and sale of the Securities.

ee. Manipulation of Prices. Except as set forth in the SEC Documents, none of the Company or the Subsidiaries, or any of their respective officers, directors or Affiliates and, to the Company's Knowledge, no one acting on any such Person's behalf has, (A) 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 or any Subsidiary to facilitate the sale or resale of any of the Securities, (B) sold, bid for, purchased, or paid any compensation for soliciting purchases of, any of the Securities, or (C) paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company or any Subsidiary, other than, in the case of clauses (B) and (C), compensation paid to the Placement Agent in connection with the placement of the Securities.

ff. Disclosure. The Company understands and confirms that each of the Buyers will rely on the foregoing representations in effecting transactions in Securities of the Company. Taken as a whole, together with the SEC Documents, all disclosure provided to the Buyers regarding the Company, its business and the transactions contemplated hereby, including the Schedules to this Agreement, furnished by or on behalf of the Company is true and correct and does not contain any untrue statement of a material fact or with respect to written information omit to state any material fact necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading.

4. COVENANTS

a. Best Efforts. Each party shall use its best efforts to timely satisfy each of the conditions to be satisfied by it as provided in Sections 5 and 6 of this Agreement.

b. Form D and Blue Sky. The Company agrees to timely file a Form D with respect to the Securities if required under Regulation D and, upon request, to provide a copy thereof to each Buyer promptly after such filing. The Company shall, on or before the Closing Date, take such action as the Company shall reasonably determine is necessary in order to obtain an exemption for, or to qualify the Securities for, sale to the Buyers at the Closing occurring on the Closing Date pursuant to this Agreement under applicable securities or "Blue Sky" laws of the states of the United States, and shall provide promptly upon the request of any Buyers evidence of any such action so taken. The Company shall make all filings and reports relating to the offer and sale of the Securities required under applicable securities or "Blue Sky" laws of the states of the United States following the Closing Date.

c. Reporting Status. From the date of this Agreement until the first date on which the Securities cease to be Registrable Securities (as defined in the Registration Rights Agreement) (the period ending on such date, the "**Reporting Period**"), the Company shall timely (including by giving effect to any extensions pursuant to Rule 12b-25 of the 1934 Act) file all reports required to be filed with the SEC pursuant to the 1934 Act.

d. Use of Proceeds. The Company will use the proceeds from the sale of the Securities to fund research and development and registration of its pipeline candidates, and for working capital and general corporate purposes.

e. Expenses. At the Closing, the Company and the Buyers shall each pay all of their own legal, due diligence and other expenses, including fees and expenses of attorneys, investigative and other consultants and travel costs and all other expenses, relating to negotiating and preparing the Transaction Documents and consummating the transactions contemplated hereby and thereby. The Company shall pay all Transfer Agent fees incurred in connection with the sale and issuance of the Securities to the Buyers.

f. Disclosure of Transactions and Other Material Information. The Company shall file, within the timeframe required under applicable SEC rules, one or more Current Reports on Form 8-K with the SEC describing the terms of the transactions contemplated by the Transaction Documents and including as exhibits to such Form 8-K this Agreement and the Registration Rights Agreement (such Form or Forms 8-K, collectively, the "**Announcing Form 8-K**"). The Company shall not, and shall cause each of its Subsidiaries and its and each of their respective officers, directors, employees and agents to not, provide any Buyer with any material non-public information regarding the Company or any of its Subsidiaries from and after the filing of the Announcing Form 8-K with the SEC without the express prior written consent of such Buyer, unless prior thereto such Buyer shall have executed a written agreement regarding the confidentiality and use of such information. Subject to the foregoing, neither the Company nor any Buyer shall issue any press releases or any other public statements with respect to the transactions contemplated hereby or disclosing the name of any Buyer; *provided, however*, that the Company shall be entitled, without the prior approval of any Buyer, to make any press release or other public disclosure with respect to such transactions (i) in substantial conformity with the Announcing Form 8-K and contemporaneously therewith and (ii) as is required by applicable law and regulations (provided that each Buyer shall be consulted by the Company in connection with any such press release or other public disclosure prior to its release and shall be provided with a copy thereof), and provided further, that the Company may issue any other announcement or press release regarding the transactions contemplated hereby, so long as such announcement or press release does not disclose the name of any Buyer. Notwithstanding anything to the contrary herein, in the event that the Company believes that a notice or communication to any Buyer contains material, non-public information relating to the Company or any of the Subsidiaries, the Company shall so indicate to the Buyers contemporaneously with delivery of such notice or communication, and such indication shall provide the Buyers the means to refuse to receive such notice or communication; and in the absence of any such indication, the holders of the Securities shall be allowed to presume that all matters relating to such notice or communication do not constitute material, non-public information relating to the Company or any of the Subsidiaries. Upon receipt or delivery by the Company or any of the Subsidiaries of any notice in accordance with the terms of the Transaction Documents, unless the Company has in good faith determined that the matters relating to such notice do not constitute material, non-public information relating to the Company or the Subsidiaries, the Company shall within one Business Day after any such receipt or delivery publicly disclose such material, non-public information.

g. USA PATRIOT Act, Investor Secrecy Act and Office of Foreign Assets Control. As required by federal law and each Buyer's policies and practices, each Buyer may need to obtain, verify and record certain customer identification information and documentation in connection with opening or maintaining accounts, or establishing or continuing to provide services, and, from the date of this Agreement until the end of the Reporting Period, the Company agrees to, and shall cause each of the Subsidiaries to, provide such information to each Buyer.

h. Regulation M. Neither the Company, nor the Subsidiaries nor any Affiliates of the foregoing, has taken or shall take any action prohibited by Regulation M under the 1934 Act, in connection with the offer, sale and delivery of the Securities contemplated hereby.

i. Disqualification Events. The Company will notify the Buyers in writing, prior to the Closing Date of (i) any Disqualification Event relating to any Covered Person and (ii) any event that would, with the passage of time, become a Disqualification Event relating to any Covered Person.

j. No Integrated Offering. Neither the Company nor any of the Subsidiaries, nor any Affiliates of the foregoing or any Person acting on the behalf of any of the foregoing, shall, directly or indirectly, make any offers or sales of any security or solicit any offers to purchase any security, under any circumstances that would require registration of any of the Securities under the 1933 Act or require stockholder approval of the issuance of any of the Securities.

k. Transfer Taxes. The Company shall be responsible for any liability with respect to any transfer, stamp or similar non-income Taxes that may be payable in connection with the execution, delivery and performance of this Agreement and the other Transaction Documents, including any such Taxes with respect to the issuance of the Securities.

l. Further Instruments and Acts. From the date of this Agreement until the end of the Reporting Period, upon request of any Buyer or Investor (as defined in the Registration Rights Agreement), the Company will execute and deliver such further instruments and do such further acts as may be reasonably necessary or proper to carry out more effectively the purposes of this Agreement and the other Transaction Documents.

m. Lockup. The Company shall not, without the prior written consent of the Placement Agent, offer, sell, contract to sell, pledge, or otherwise dispose of, (or enter into any transaction that is designed to, or might reasonably be expected to, result in the disposition (whether by actual disposition or effective economic disposition due to cash settlement or otherwise) by the Company or any affiliate of the Company or any person in privity with the Company or any affiliate of the Company) directly or indirectly, including the filing (or participation in the filing) of a registration statement with the SEC in respect of, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Exchange Act, any other shares of Common Stock or any securities convertible into, or exercisable, or exchangeable for, shares of Common Stock; or publicly announce an intention to effect any such transaction, for a period of 90 days after the date of this Agreement, provided, however, that the Company may (i) effect the transactions contemplated hereby, including performing its obligations under the Registration Rights Agreement, (ii) issue and sell shares of Common Stock or any securities convertible into or exercisable or exchangeable for shares of Common Stock, pursuant to any employee stock option plan, stock ownership plan, dividend reinvestment plan or other plan or arrangement of the Company described in the SEC Documents (collectively, the "**Company Plans**"), (iii) issue shares of Common Stock issuable upon the conversion of securities outstanding at the date of this Agreement or the exercise of warrants or options or the settlement of restricted stock units outstanding at the date of this Agreement or issued thereafter pursuant to a Company Plan, (iv) file one or more registration statements on Form S-8 relating to any Company Plan, and (v) issue shares of Common Stock or any securities convertible into, or exercisable, or exchangeable for shares of Common Stock, or enter into an agreement to issue shares of Common Stock, or any securities convertible into or exercisable or exchangeable for shares of Common Stock in connection with any merger, joint venture, strategic alliance or partnership) as long as (x) the aggregate number of shares of Common Stock, or securities convertible into or exercisable or exchangeable for shares of Common Stock, that the Company may issue or agree to issue pursuant to this clause (v) shall not exceed 5.0% of the total outstanding shares of Common Stock immediately following the issuance of the Securities and (y) the recipients of such securities execute a Lock-Up Agreement in the form of Exhibit D hereto.

n. Disclosure. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, all of which will be disclosed in a Form 8-K on or prior to the Closing Date, the Company confirms that neither it nor any other Person acting on its behalf has provided any of the Buyers with any information that it believes constitutes or would reasonably be deemed to constitute material, non-public information that will not otherwise be disclosed in the SEC Documents on or prior to the Closing Date. The Company understands and confirms that the Buyers will rely on the foregoing representation in effecting transactions in securities of the Company.

5. CONDITIONS TO THE COMPANY'S OBLIGATION TO SELL. The obligation of the Company to issue and sell the Securities to each Buyer at the Closing is subject to the satisfaction, at or before the Closing Date, of each of the following conditions; *provided* that these conditions are for the Company's sole benefit and may be waived by the Company at any time in its sole discretion by providing each Buyer with prior written notice thereof:

a. Such Buyer shall have executed each of the Transaction Documents to which it is a party and delivered the same to the Company.

b. Such Buyer shall have delivered to the Company the Purchase Price for the Shares and Warrants being purchased by such Buyer at the Closing by wire transfer of immediately available funds pursuant to the wire instructions provided by the Company.

c. The representations and warranties of such Buyer shall be true and correct as of the date when made and as of the Closing Date as though made at that time (except for representations and warranties that speak as of a specific date, which shall be true and correct as of such date), and such Buyer shall have performed, satisfied and complied with the covenants, agreements and conditions required by the Transaction Documents to be performed, satisfied or complied with by such Buyer at or prior to the Closing Date.

d. No statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered, promulgated or endorsed by any court or governmental authority of competent jurisdiction that prohibits the consummation of any of the transactions contemplated by the Transaction Documents.

e. The Company shall have filed with the Principal Market the listing of additional shares application for the Shares and shall have received no objections to such form from the staff of the Principal Market.

6. CONDITIONS TO EACH BUYER'S OBLIGATION TO PURCHASE. The obligation of each Buyer hereunder to purchase the Securities from the Company at the Closing is subject to the satisfaction, at or before the Closing Date, of each of the following conditions; *provided* that these conditions are for each Buyer's sole benefit and may be waived only by such Buyer at any time in its sole discretion by providing the Company with prior written notice thereof:

a. The Company shall have executed each of the Transaction Documents to which it is a party and delivered the same to such Buyer.

b. The representations and warranties of the Company and the Subsidiaries shall be true and correct in all material respects as of the date when made and as of the Closing Date as though made at that time (except for representations and warranties that speak as of a specific date, which shall be true and correct as of such date) and the Company and the Subsidiaries shall have performed, satisfied and complied with the covenants, agreements and conditions required by the Transaction Documents to be performed, satisfied or complied with by the Company and the Subsidiaries at or prior to the Closing Date. Such Buyer shall have received a certificate, executed by either the chief executive officer of the chief accounting officer of the Company, dated as of the Closing Date, to the foregoing effect and as to such other matters as may be reasonably requested by such Buyer.

c. Such Buyer shall have received an opinion of Skadden, Arps, Meagher, Slate & Flom LLP ("**Skadden**"), reasonably acceptable to the Buyers, dated as of the Closing Date and addressed to the Buyers and the Placement Agents which opinion will address, among other things, laws of the State of Delaware and the State of New York and federal law applicable to the transactions contemplated hereby.

- d. The Company shall have executed and delivered the Transfer Instructions, acknowledged in writing by the Transfer Agent, with respect to the Shares and Warrants being purchased by such Buyer at the Closing to the Transfer Agent and delivered a copy thereof to such Buyer.
- e. The Company Board shall have adopted, and not rescinded or otherwise amended or modified, authorizations consistent with Section 3.b (the "**Resolutions**").
- f. Upon written request of a Buyer, the Company shall have delivered to such Buyer (i) a certificate evidencing the incorporation or organization and good standing of the Company in its state of incorporation and (ii) a certificate evidencing the Company's qualification as a foreign corporation and good standing in the state of its principal place of business issued by the Secretary of State (or other applicable authority) of such state of incorporation or principal place of business as of a date within five (5) Business Days of the Closing Date.
- g. Upon written request of a Buyer, the Company shall have delivered to such Buyer a secretary's certificate, dated as of the Closing Date, certifying as to (A) the Resolutions, (B) the Certificate of Incorporation, certified as of a date within five (5) Business Days of the Closing Date, by the Secretary of State of the State of Delaware, and (C) the Bylaws.
- h. The Company shall have delivered to such Buyer a Lock-Up Agreement, substantially in the form of Exhibit C hereto (the "**Lock-Up Agreement**") executed by each person listed on Exhibit D hereto, and each such Lock-Up Agreement shall be in full force and effect on the Closing Date.
- i. The Company shall have made all filings under all applicable federal and state securities laws necessary to consummate the issuance of the Securities pursuant to this Agreement in compliance with such laws.
- j. The Company shall have filed with the Principal Market the listing of additional shares application for the Shares and shall have received no objections to such form from the staff of the Principal Market.
- k. During the period beginning on the date of this Agreement and ending immediately prior to the Closing, there shall not have been any stock dividend, stock split, stock combination, recapitalization or other similar transaction with respect to any capital stock of the Company, including the Common Stock.
- l. Since the date hereof, no event or series of events shall have occurred that has had or would reasonably be expected to have a Material Adverse Effect.
- m. No statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered, promulgated or endorsed by any court or governmental authority of competent jurisdiction that prohibits the consummation of any of the transactions contemplated by the Transaction Documents.
- n. The Company and the Subsidiaries shall have delivered to such Buyer such other documents relating to the transactions contemplated by this Agreement as such Buyer or its counsel may reasonably request.

7. INDEMNIFICATION.

a. Company Indemnification Obligation. In consideration of each Buyer's execution and delivery of the Transaction Documents and acquiring the Securities thereunder and in addition to all of the Company's and the Subsidiaries' other obligations under the Transaction Documents, the Company shall defend, protect, indemnify and hold harmless each Buyer and each other holder of the Securities and all of their officers, directors, members, managers, employees and any of the foregoing Persons' agents or other representatives (including those retained in connection with the transactions contemplated by this Agreement) (collectively, the "**Indemnitees**") from and against any and all actions, causes of action, suits, claims, losses, costs, penalties, fees, liabilities and damages, and expenses in connection therewith, and including reasonable attorneys' fees and disbursements (the "**Indemnified Liabilities**"), incurred by any Indemnitees as a result of, or arising out of, or relating to (a) any material misrepresentation or breach of any representation or warranty made by the Company or any of the Subsidiaries in the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby, (b) any material breach of any covenant, agreement or obligation of the Company or any of the Subsidiaries contained in the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby or (c) any cause of action, suit or claim brought or made against such Indemnitees and arising out of or resulting from the execution, delivery, performance or enforcement of the Transaction Documents in accordance with the terms hereof or thereof or any other certificate, instrument or document contemplated hereby or thereby in accordance with the terms thereof (other than a cause of action, suit or claim brought or made against an Indemnitee by such Indemnitee's owners, investors or affiliates), except, in each case, to the extent any Indemnified Liabilities resulted from such Indemnitee's gross negligence, willful misconduct or fraud or to the extent that a loss, claim, damage or liability is attributable to such Buyer's breach of any of the representations, warranties, covenants or agreements made by such Buyer in this Agreement or in the other Transaction Documents. To the extent that the foregoing undertaking by the Company may be unenforceable for any reason, the Company shall make the maximum contribution to the payment and satisfaction of each of the Indemnified Liabilities that is permissible under applicable law.

b. Indemnification Procedures. Each Indemnitee shall (i) give prompt written notice to the Company of any claim with respect to which it seeks indemnification or contribution pursuant to this Agreement (provided, however, that the failure of the Indemnitee to promptly deliver such notice shall not relieve the Company of any liability, except to the extent that the Company is prejudiced in its ability to defend such claim) and (ii) permit the Company to assume the defense of such claim with counsel selected by the Company and reasonably satisfactory to the Indemnitee; provided, however, that any Indemnitee 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 the Indemnitee unless (A) the Company has agreed in writing to pay such fees and expenses, or (B) in the reasonable judgment of the Indemnitee, based upon advice of its counsel, a conflict of interest may exist between the Indemnitee and the Company with respect to such claims (in which case, if the Indemnitee notifies the Company in writing that it elects to employ separate counsel at the expense of the Company, the Company shall not have the right to assume the defense of such claim on behalf of the Indemnitee). If the Company assumes the defense of the claim, it shall not be subject to any liability for any settlement or compromise made by the Indemnitee without its consent (but such consent shall not be unreasonably withheld, conditioned or delayed). In connection with any settlement negotiated by the Company, the Company shall not, and no Indemnitee shall be required by the Company to, (I) enter into any settlement which does not include as an unconditional term thereof the giving by the claimant or plaintiff to the Indemnitee of a release from all liability in respect to such claim or litigation, (II) enter into any settlement that attributes by its terms any liability, culpability or fault to the Indemnitee, or (III) consent to the entry of any judgment that does not include as a term thereof a full dismissal of the litigation or proceeding with prejudice. In addition, without the consent of the Indemnitee, the Company shall not consent to entry of any judgment or enter into any settlement which provides for any obligation or restriction on the part of the Indemnitee other than the payment of money damages which are to be paid in full by the Company. If the Company is not entitled to assume or continue the defense of such claim pursuant to clause (B) above, the Indemnitee shall have the right without prejudice to its right of indemnification hereunder to, in its discretion exercised in good faith and upon advice of counsel, to contest, defend and litigate such claim and may settle such claim, either before or after the initiation of litigation, at such time and upon such terms as the Indemnitee deems fair and reasonable; provided that, at least fifteen (15) days prior to any settlement, written notice of such Indemnitee's intention to settle is given to the Company. If requested by the Company, the Indemnitee agrees (at no expense to the Indemnitee) to reasonably cooperate with the Company and its counsel in contesting any claim that the Company elects to contest.

8. GOVERNING LAW; MISCELLANEOUS.

a. Governing Law; Jurisdiction; Jury Trial. All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of New York or any other jurisdiction) that would cause the application of the laws of any jurisdiction other than the State of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the courts of New York for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof to such party at the address for such notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. 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 PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HEREWITH OR ARISING OUT OF THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.

b. Counterparts; Execution. This Agreement may be executed in two or more identical counterparts, all of which shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to each other party. A PDF or other reproduction of this Agreement may be executed by one or more parties hereto, and an executed copy of this Agreement may be delivered by one or more parties hereto by e-mail or other electronic transmission device pursuant to which the signature of or on behalf of such party can be seen, and such execution and delivery shall be considered legal, valid, binding and effective for all purposes. The parties hereto hereby agree that no party shall raise the execution of a PDF or other reproduction of this Agreement, or the fact that any signature or document was transmitted or communicated by e-mail or other electronic transmission device, as a defense to the formation of this Agreement.

c. Headings. The headings of this Agreement are for convenience of reference and shall not form part of, or affect the interpretation of, this Agreement.

d. Severability. If any provision of this Agreement shall be invalid or unenforceable in any jurisdiction, such invalidity or unenforceability shall not affect the validity or enforceability of the remainder of this Agreement in that jurisdiction or the validity or enforceability of any provision of this Agreement in any other jurisdiction.

e. Entire Agreement; Amendments; Waivers. This Agreement supersedes all other prior oral or written agreements among each Buyer, the Company and the Subsidiaries, their affiliates and Persons acting on their behalf with respect to the matters discussed herein, and this Agreement and the instruments referenced herein contain the entire understanding of the parties hereto with respect to the matters covered herein and therein. No provision of this Agreement may be waived, modified, supplemented or amended other than by an instrument in writing signed by the Company and by each of the Buyers listed on the Schedule of Buyers (in either case, the "**Required Buyers**"). Any such amendment shall bind all holders of the Securities. No such amendment shall be effective to the extent that it applies to less than all of the holders of the Securities then outstanding. No failure or delay on the part of a party in either exercising or enforcing any right under this Agreement shall operate as a waiver of, or impair, any such right. No single or partial exercise or enforcement of any such right shall preclude any other or further exercise or enforcement thereof or the exercise or enforcement of any other right. No waiver of any such right shall be deemed a waiver of any other right. No consideration shall be offered or paid to any Person to amend or consent to a waiver or modification or supplement of any provision of any of the Transaction Documents unless the same consideration also is offered to all of the parties hereto or to the other Transaction Documents or holders of the Securities, as the case may be. For clarification purposes, this provision constitutes a separate right granted to each Buyer and is not intended for the Company to treat the Buyers as a class and shall not be construed in any way as the Buyers acting in concert or otherwise as a group with respect to the purchase, disposition or voting of securities or otherwise.

f. Notices. Any notices, consents, waivers or other communications required or permitted to be given under the terms of this Agreement must be in writing and will be deemed to have been delivered upon receipt, when delivered personally or by a nationally recognized overnight delivery service, in each case properly addressed to the party to receive the same. The addresses for such communications shall be:

If to the Company:

Applied Therapeutics, Inc.
545 Fifth Avenue, Suite 1400
New York, NY 10017
(212) 220 - 9226
Attention: Chief Executive Officer

With copy to:

Skadden, Arps, Slate, Meagher & Flom LLP
One Manhattan West
New York, NY 10001
(212) 735-3000
Attention: Michael J. Schwartz

If to a Buyer, to it at the address set forth under such Buyer's name on its signature page hereto, or, in the case of a Buyer or any other party named above, at such other address and/or to the attention of such other Person as the recipient party has specified by written notice given to each other party five (5) days prior to the effectiveness of such change. Written confirmation of receipt (A) given by the recipient of such notice, consent, waiver or other communication; (B) provided by affidavit of personal delivery by a delivery service selected by the Company; or (C) provided by a nationally recognized overnight delivery service shall be rebuttable evidence of personal service or deposit with a nationally recognized overnight delivery service.

g. Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns, including any purchasers of the Securities. The Company shall not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Required Buyers. A Buyer may assign some or all of its rights hereunder without the consent of the Company; *provided, however*, that any such assignment shall not release such Buyer from its obligations hereunder unless such obligations are assumed by such assignee and the Company has consented to such assignment and assumption, which consent shall not be unreasonably withheld.

h. No Third-Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto and their respective permitted successors and assigns and, to the extent provided in Section 7, each Indemnitee, and is not for the benefit of, nor may any provision hereof be enforced by, any other Person, except that the Placement Agents are the intended third-party beneficiary of Sections 2 and 3 hereof and shall be permitted to rely on the legal opinion identified in Section 6.c hereof.

i. Survival. Unless this Agreement is terminated under Section 8.k, the representations and warranties of the Company and the Buyers contained in Sections 2 and 3, the agreements and covenants set forth in Section 4 and this Section 8, and the indemnification provisions set forth in Section 7, shall survive the Closing. Each Buyer shall be responsible only for its own representations, warranties, agreements and covenants hereunder.

j. Further Assurances. Each party shall do and perform, or cause to be done and performed, all such further acts and things, and shall execute and deliver all such other agreements, certificates, instruments and documents, as the other party may reasonably request in order to carry out the intent and accomplish the purposes of this Agreement and the consummation of the transactions contemplated hereby.

k. Termination. In the event that the Closing shall not have occurred with respect to a Buyer on or before the fifth (5th) Business Day following the date of this Agreement due to the Company's or such Buyer's failure to satisfy the conditions set forth in Sections 5 and 6 above (and the nonbreaching party's failure to waive such unsatisfied condition(s)), the nonbreaching party shall have the option to terminate this Agreement with respect to such breaching party at the close of business on such date without liability of any party to any other party.

l. Placement Agents. The Company shall be responsible for the payment of any placement agent's fees or broker's commissions relating to or arising out of the transactions contemplated hereby. The Company shall pay, and hold each of the Buyers harmless against, any liability, loss or expense (including reasonable and documented attorneys' fees and out-of-pocket expenses) arising in connection with any claim for any such payment.

m. No Strict Construction. The language used in this Agreement will be deemed to be the language chosen by the parties thereto express their mutual intent, and no rules of strict construction will be applied against any party.

n. Remedies. The parties hereto agree that (i) irreparable harm would occur in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms or were otherwise breached, and (ii) money damages or other legal remedies would not be an adequate remedy for any such harm. Each Buyer and each holder of the Securities shall have all rights and remedies set forth in the Transaction Documents and all rights and remedies that such Buyers and holders have been granted at any time under any other agreement or contract and all of the rights that such Buyers and holders have under any law. Any Person having any rights under any provision of this Agreement shall be entitled to enforce such rights specifically (without posting a bond or other security or proving actual damages), to recover damages by reason of any breach of any provision of this Agreement and to exercise all other rights granted by law.

o. Payment Set Aside. To the extent that the Company makes a payment or payments to any Buyer pursuant to any Transaction Document or a Buyer enforces or exercises its rights thereunder, and such payment or payments or the proceeds of such enforcement or exercise or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside, recovered from, disgorged by or are required to be refunded, repaid or otherwise restored to the Company, a trustee, receiver or any other Person under any law (including, without limitation, any bankruptcy law, state or federal law, common law or equitable cause of action), then to the extent of any such restoration the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such enforcement or setoff had not occurred.

p. Independent Nature of Buyers. The obligations of each Buyer hereunder are several and not joint with the obligations of any other Buyer, and no Buyer shall be responsible in any way for the performance of the obligations of any other Buyer hereunder. Each Buyer shall be responsible only for its own representations, warranties, agreements and covenants hereunder. The decision of each Buyer to purchase the Securities pursuant to this Agreement has been made by such Buyer independently of any other Buyer and independently of any information, materials, statements or opinions as to the business, affairs, operations, assets, properties, liabilities, results of operations, condition (financial or otherwise) or prospects of the Company or any of the Subsidiaries which may have been made or given by any other Buyer or by any agent or employee of any other Buyer, and no Buyer or any of its agents or employees shall have any liability to any other Buyer (or any other Person or entity) relating to or arising from any such information, materials, statements or opinions. Nothing contained herein, and no action taken by any Buyer pursuant hereto or thereto (including a Buyer's purchase of Securities at the Closing at the same time as any other Buyer or Buyers), shall be deemed to constitute the Buyers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Buyers are in any way acting in concert or as a group with respect to such obligations or the transactions contemplated hereby. Each Buyer shall be entitled to independently protect and enforce its rights, including the rights arising out of this Agreement and the other Transaction Documents, and it shall not be necessary for any other Buyer to be joined as an additional party in any proceeding for such purpose. Each Buyer has been represented by its own separate legal counsel in its review and negotiation of the Transaction Documents. The Company has elected to provide all Buyers with the same terms and Transaction Documents for the convenience of the Company and not because it was required or requested to do so by any Buyer.

q. Interpretative Matters. Unless the context otherwise requires, (i) all references to Sections, Schedules or Exhibits are to Sections, Schedules or Exhibits contained in or attached to this Agreement, (ii) each accounting term not otherwise defined in this Agreement has the meaning assigned to it in accordance with GAAP, (iii) words in the singular or plural include the singular and plural and pronouns stated in either the masculine, the feminine or neuter gender shall include the masculine, feminine and neuter, (iv) the use of the word "including" in this Agreement shall be by way of example rather than limitation, and (v) the word "or" shall not be exclusive. All statements as to factual matters contained in any certificate or other instrument delivered by or on behalf of the Company pursuant to this Agreement or any of the other Transaction Documents in connection with the transactions contemplated hereby or thereby shall be deemed to be representations and warranties by the Company, as if made by the Company pursuant to Section 3 hereof, as of the date of such certificate or instrument (including for purposes of Section 7 hereof).

* * * * *

IN WITNESS WHEREOF, the Buyers and the Company have caused this Securities Purchase Agreement to be duly executed as of the date first written above.

COMPANY:

Applied Therapeutics, Inc.

By: /s/ Shoshana Shendelman

Name: Shoshana Shendelman

Title: Chief Executive Officer

[Signature Page to Securities Purchase Agreement]

BUYERS:

NAME OF BUYER:

VENROCK HEALTHCARE CAPITAL PARTNERS EG, L.P.

By: /s/ Sherman Souther

Name: Sherman Souther

Title: Authorized Signatory

Aggregate Share Purchase Price: \$3,804,557.53

Number of Shares to be Acquired: 4,021,731

Aggregate Warrant Purchase Price: \$10,411,443.00

Number of Warrants to be Acquired: 11,017,400

[Signature Page to Securities Purchase Agreement]

BUYERS:

NAME OF BUYER:

VENROCK HEALTHCARE CAPITAL PARTNERS III, L.P.

By: VHCP Management III, LLC, its general partner
VR Adviser, LLC, its manager

By: /s/ Sherman Souther

Name: Sherman Souther

Title: Authorized Signatory

Aggregate Share Purchase Price: \$1,407,172.16

Number of Shares to be Acquired: 1,487,497

Aggregate Warrant Purchase Price: \$3,850,827.75

Number of Warrants to be Acquired: 4,074,950

[Signature Page to Securities Purchase Agreement]

BUYERS:

NAME OF BUYER:

VHCP CO-INVESTMENT HOLDINGS III, LLC

By: VHCP Management III, LLC, its manager
VR Adviser, LLC, its manager

By: /s/ Sherman Souther

Name: Sherman Souther

Title: Authorized Signatory

Aggregate Share Purchase Price: \$140,770.48

Number of Shares to be Acquired: 148,806

Aggregate Warrant Purchase Price: \$385,229.25

Number of Warrants to be Acquired: 407,650

[Signature Page to Securities Purchase Agreement]

BUYERS:

NAME OF BUYER:

Franklin Templeton Investment Funds – Franklin Biotechnology Discovery Fund

By: Franklin Advisers, Inc., as investment manager

By: /s/ Evan McCulloch

Name: Evan McCulloch

Title: Senior Vice President

Aggregate Share Purchase Price: \$2,046,054.21

Number of Shares to be Acquired: 2,162,848

Aggregate Warrant Purchase Price: 0

Number of Warrants to be Acquired: 0

[Signature Page to Securities Purchase Agreement]

BUYERS:

NAME OF BUYER:

Franklin Strategic Series – Franklin Biotechnology Discovery Fund

By: Franklin Advisers, Inc., as investment manager

By: /s/ Evan McCulloch

Name: Evan McCulloch

Title: Senior Vice President

Aggregate Share Purchase Price: \$953,946.40

Number of Shares to be Acquired: 1,008,400

Aggregate Warrant Purchase Price: 0

Number of Warrants to be Acquired: 0

[Signature Page to Securities Purchase Agreement]

BUYERS:

NAME OF BUYER:

Richard and Suzanne Kayne Living Trust dtd 1/14/1999

By: /s/ Richard Kayne

Name: Richard Kayne

Title: Trustee

Aggregate Share Purchase Price: \$306,251.42

Number of Shares to be Acquired: 323,733

Aggregate Warrant Purchase Price: \$2,193,751.35

Number of Warrants to be Acquired: 2,321,430

[Signature Page to Securities Purchase Agreement]

BUYERS:

NAME OF BUYER:

PROPEL BIO PARTNERS L.P.

By: Propel Bio Partners LLC, its general partner

By: /s/ Leen Kawas

Name: Leen Kawas

Title: Managing Member

Aggregate Share Purchase Price: \$122,499.43

Number of Shares to be Acquired: 129,492

Aggregate Warrant Purchase Price: \$877,499.60

Number of Warrants to be Acquired: 928,571

[Signature Page to Securities Purchase Agreement]

BUYERS:

NAME OF BUYER:

PB SPV- I LLC

By: Propel Bio Partners LLC, its managing member

By: /s/ Leen Kawas

Name: Leen Kawas

Title: Managing Member

Aggregate Share Purchase Price: \$428,749.90

Number of Shares to be Acquired: 453,224

Aggregate Warrant Purchase Price: \$3,071,249.06

Number of Warrants to be Acquired: 3,249,999

[Signature Page to Securities Purchase Agreement]

SCHEDULE OF BUYERS

Buyer's Name	Number of Shares	Aggregate Purchase Price of Shares	Number of Pre-Funded Warrants	Aggregate Purchase Price of Pre-Funded Warrants	Aggregate Purchase Price
Venrock Healthcare Capital Partners EG, L.P.	4,021,731	\$ 3,804,557.53	11,017,400	\$ 10,411,443.00	\$ 14,216,000.53
Venrock Healthcare Capital Partners III, L.P.	1,487,497	\$ 1,407,172.16	4,074,950	\$ 3,850,827.75	\$ 5,257,999.91
VHCP Co-Investment Holdings III, LLC	148,806	\$ 140,770.48	407,650	\$ 385,229.25	\$ 525,999.73
PB SPV-I LLC	453,224	\$ 428,749.90	3,249,999	\$ 3,071,249.06	\$ 3,499,998.96
Propel Bio Partners L.P.	129,492	\$ 122,499.43	928,571	\$ 877,499.60	\$ 999,999.03
for Richard and Suzanne Kayne Living Trust dtd 1/14/1999	323,733	\$ 306,251.42	2,321,430	\$ 2,193,751.35	\$ 2,500,002.77
Franklin Strategic Series – Franklin Biotechnology Discovery Fund	1,008,400	\$ 953,946.40	0	\$ 0	\$ 953,946.40
Franklin Templeton Investment Funds – Franklin Biotechnology Discovery Fund	2,162,848	\$ 2,046,054.21	0	\$ 0	\$ 2,046,054.21
Total	9,735,731	\$ 9,210,001.53	22,000,000	\$ 20,790,000.00	\$ 30,000,001.53

Exhibit A

[Form of Registration Rights Agreement]

Exhibit B

[Form of Pre-Funded Warrants]

Exhibit C

[Lock-up Agreement]

Exhibit D

List of Persons Signing Lock-Up Agreements

1. Shoshana Shendelman
 2. Stacy Kanter
 3. Teena Lerner
 4. Joel Marcus
 5. Les Funtleyder
 6. Jay Skyler
 7. Ricardo Perfetti
 8. Adam Hansard
 9. Steven Ortega
 10. Alexandria Venture Investments, LLC
 11. Clearpoint Strategy Group LLC
 12. Sycamore Family I LLC
 13. Vladimir Shendelman
 14. Sycamore 2020 GRAT
 15. Ginko Family LLC
 16. Alexandria Equities No. 7, LLC
-

SCHEDULES

Schedule of Buyers

EXHIBITS

Exhibit A	Form of Registration Rights Agreement
Exhibit B	Form of Pre-Funded Warrant
Exhibit C	Form of Lock-Up Agreement
Exhibit D	List of Persons Signing Lock-Up Agreements

REGISTRATION RIGHTS AGREEMENT

REGISTRATION RIGHTS AGREEMENT (this "**Agreement**"), dated as of April 23, 2023, by and among Applied Therapeutics, Inc., a Delaware corporation, with principal office located at 545 Fifth Avenue, Suite 1400, New York, New York 10017 (the "**Company**") and the undersigned buyers, (each, a "**Buyer**" and, collectively, the "**Buyers**").

WHEREAS:

A. Pursuant to the Securities Purchase Agreement by and among the parties hereto of even date herewith (the "**Securities Purchase Agreement**"), the Company has agreed, upon the terms and subject to the conditions of the Securities Purchase Agreement, to issue and sell to the Buyers at the Closing (as defined in the Securities Purchase Agreement) (i) the number of shares of the Company's common stock, par value \$0.0001 per share (the "**Common Stock**") set forth on the Schedule of Buyers to the Securities Purchase Agreement (the "**Shares**"), and (ii) the number of pre-funded warrants (the "**Warrants**") and together with the Shares the "**Securities**") set forth on the Schedule of Buyers to the Securities Purchase Agreement.

B. To induce the Buyers to purchase the Securities pursuant to the Securities Purchase Agreement, the Company has agreed to provide certain registration rights under the Securities Act of 1933, as amended, or any similar successor statutes and the rules and regulations thereunder (collectively, the "**1933 Act**").

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company and each of the Buyers hereby agree as follows:

1. **DEFINITIONS.** As used in this Agreement, the following terms shall have the following meanings:

a. "**1934 Act**" means, collectively, the Securities and Exchange Act of 1934, as amended, and the rules and regulations thereunder, or any similar successor statutes.

b. "**Affiliate**" means, as to any specified Person, (i) any Person that directly, or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with, the specified Person, (ii) any executive officer, director, trustee or general partner of the specified Person and (iii) any legal entity for which the specified Person acts as an executive officer, director, trustee or general partner. For purposes of this definition, "control" (including the correlative meanings of the terms "controlled by" and "under common control with"), as used with respect to any Person, shall mean the possession, directly, or indirectly through one or more intermediaries, of the power to direct or cause the direction of the management and policies of such Person, whether by contract, through the ownership of voting securities, partnership interests or other equity interests or otherwise.

c. "**Business Day**" means any day other than Saturday, Sunday or any other day on which commercial banks in the City of New York are authorized or required by law to remain closed.

- d. **"Closing Date"** means the date of the issuance of the Shares pursuant to the Securities Purchase Agreement.
- e. **"Cutback Effectiveness Date"** means the date a Cutback Registration Statement is declared effective by the SEC.
- f. **"Cutback Effectiveness Deadline"** means, as to a Cutback Registration Statement, ninety (90) days following the filing of such Cutback Registration Statement.
- g. **"Cutback Filing Deadline"** means, if Cutback Shares are required to be included in a Cutback Registration Statement, the date that is the earlier of (i) the later of (A) six (6) months from the Initial Effectiveness Date or the then-most recent Cutback Effectiveness Date, as applicable, and (B) sixty (60) days after the Company has been informed that substantially all of the Registrable Securities held by the Investors included in any Registration Statements previously declared effective hereunder have been sold in accordance therewith, or (ii) sixty (60) days from the first date on which the Company is then permitted by the SEC to register such Cutback Shares.
- h. **"Cutback Registrable Securities"** means, (i) any Cutback Shares not previously included in a Registration Statement, and (ii) any shares of capital stock of the Company (or any successor or assign of the Company, whether by merger, reorganization, consolidation, sale of assets or otherwise) which may be issued or issuable with respect to, in exchange for, or in substitution of the Cutback Shares, as a result of any stock split, stock dividend, recapitalization, exchange or similar event or otherwise; *provided, however*, that any Cutback Registrable Securities shall cease to be Cutback Registrable Securities when (a) a Registration Statement with respect to the sale of such securities has become effective under the 1933 Act and such securities are disposed of in accordance with such Registration Statement, or (b) such securities are sold in accordance with Rule 144, or (c) all of such securities are eligible to be sold by the holder thereof pursuant to Rule 144 without limitation, restriction or condition (including any current public information requirement) thereunder, or (d) when such securities are sold to the Company.
- i. **"Cutback Registration Statement"** means a registration statement or registration statements of the Company filed under the 1933 Act covering any Cutback Registrable Securities (which shall include, at any particular time, each document incorporated or deemed to be incorporated by reference therein).
- j. **"Cutback Required Registration Amount"** means the lesser of (i) any Cutback Shares not previously included in a Registration Statement, and (ii) such number of Registrable Securities as the Company is then permitted by the SEC to register pursuant to Rule 415.
- k. **"Cutback Shares"** means, at any time on or after the Initial Effectiveness Date, any of the Registrable Securities not included in all Registration Statements previously declared effective hereunder as a result of a limitation on the maximum number of shares of Common Stock permitted by the SEC to be registered pursuant to Rule 415.
- l. **"Effectiveness Deadline"** means the Initial Effectiveness Deadline, a Cutback Effectiveness Deadline or a Subsequent Effectiveness Deadline, as applicable.

- m. **"Filing Deadline"** means the Initial Filing Deadline, a Cutback Filing Deadline or a Subsequent Filing Deadline, as applicable.
- n. **"Governmental Authority"** means the government of the United States of America or the government of any other nation, or any political subdivision thereof, whether state, provincial or local, or any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administration powers or functions of or pertaining to government over the Company or any of its subsidiaries, or any of their respective properties, assets or undertakings.
- o. **"Initial Effectiveness Date"** means the date the Initial Registration Statement is declared effective by the SEC.
- p. **"Initial Effectiveness Deadline"** means the date that is thirty (30) days after the Initial Filing Date unless (i) the Required Holders agree in writing to extend such deadline at the Company's request or (ii) the Company receives a comment letter from the SEC with respect to the Registration Statement covering the resale of the Registrable Securities, in which case the Initial Effectiveness Deadline will automatically extend an additional thirty (30) days from the date such comment letter was received.
- q. **"Initial Filing Date"** means the date on which the Initial Registration Statement is filed with the SEC.
- r. **"Initial Filing Deadline"** means the date that is thirty (30) days after the Closing Date.
- s. **"Initial Registration Statement"** means a Registration Statement or Registration Statements filed under the 1933 Act pursuant to Section 2(a) hereof covering the Registrable Securities (which shall include, at any particular time, each document incorporated or deemed to be incorporated by reference therein).
- t. **"Initial Required Registration Amount"** means the lesser of (i) 100% of the Registrable Securities as of the trading day immediately preceding the applicable date of determination, or (ii) such maximum number of Registrable Securities as the Company is then permitted to register by the SEC.
- u. **"Investor"** means a Buyer or any transferee or assignee thereof to whom a Buyer assigns its rights under this Agreement and who agrees to become bound by the provisions of this Agreement in accordance with Section 9 and such a transferee or assignee thereof to whom a transferee or assignee assigns its rights under this Agreement and who agrees to become bound by the provisions of this Agreement in accordance with Section 9.
- v. **"Person"** means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, a government or any department or agency thereof, or any other legal entity.
- w. **"Prospectus"** means the prospectus included in any Registration Statement (as defined below), including any preliminary prospectus, and all other amendments and supplements to any such prospectus, including post-effective amendments, and all material incorporated by reference or deemed to be incorporated by reference, if any, in such prospectus.

x. **"Register," "registered," and "registration"** refer to a registration effected by preparing and filing one or more Registration Statements in compliance with the 1933 Act and pursuant to Rule 415 and the declaration or ordering of effectiveness of such Registration Statement(s) by the SEC.

y. **"Registrable Securities"** means (i) the Shares; (ii) the shares of Common Stock issuable upon the exercise of the Warrants (the **"Warrant Shares"**); and (iii) any shares of capital stock of the Company (or any successor or assign of the Company, whether by merger, reorganization, consolidation, sale of assets or otherwise) which may be issued or issuable with respect to, in exchange for, or upon the exercise or conversion of the Shares or the Warrant Shares, as a result of any stock split, stock dividend, recapitalization, exchange or similar event or otherwise; *provided, however*, that any Registrable Securities shall cease to be Registrable Securities when (a) a Registration Statement with respect to the sale of such securities has become effective under the 1933 Act and such securities are disposed of in accordance with such Registration Statement, (b) such securities are sold in accordance with Rule 144 or an applicable exemption from registration under the 1933 Act, or (c) all of such securities are eligible to be sold by the holder thereof pursuant to Rule 144 without limitation, restriction or condition (including any current public information requirement) thereunder, or (d) when such securities are sold to the Company. 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.

z. **"Registration Statement"** means a registration statement or registration statements of the Company filed under the 1933 Act covering Registrable Securities and the resale thereof (which shall include, at any particular time, each document incorporated or deemed to be incorporated by reference therein).

aa. **"Required Holders"** means the holders of a majority of the Registrable Securities.

bb. **"Rule 144"** means Rule 144 under the 1933 Act or any successor rule.

cc. **"Rule 415"** means Rule 415 under the 1933 Act or any successor rule providing for offering securities on a continuous or delayed basis.

dd. **"SEC"** means the United States Securities and Exchange Commission.

Capitalized terms used herein and not otherwise defined herein shall have the respective meanings set forth in the Securities Purchase Agreement.

2. REGISTRATION.

a. **Initial Mandatory Registration.** The Company shall prepare, and, as soon as reasonably practicable, but in no event later than the Initial Filing Deadline, file with the SEC a Registration Statement covering the resale of the Registrable Securities for an offering to be made on a continuous basis pursuant to Rule 415 or, if Rule 415 is not available for offers and sales of the Registrable Securities, by such other means of distribution of Registrable Securities as the Investors may reasonably specify, in respect of which the Company may use a registration statement on Form S-3 (or any successor short form registration statement available for such resale that permits incorporation by reference at least to the same extent as such form) or, if a registration statement on Form S-3 is not then available to the Company, on such form of registration statement as is then available to effect a registration for resale of the Registrable Securities. The Initial Registration Statement prepared pursuant hereto shall register for resale at least the number of Registrable Securities equal to the Initial Required Registration Amount determined as of the date the Initial Registration Statement is initially filed with the SEC (subject to subsequent reduction if directed by the staff of the SEC). The Company shall use best efforts to have the Initial Registration Statement declared effective by the SEC as soon as reasonably practicable, but in no event later than the Initial Effectiveness Deadline and shall use commercially reasonable efforts to have the Initial Registration Statement remain continuously effective under the 1933 Act until such date on which there are no longer any Registrable Securities covered by such Initial Registration Statement.

b. Cutback Mandatory Registrations. The Company shall prepare, and, as soon as reasonably practicable, but in no event later than each Cutback Filing Deadline, file with the SEC a Cutback Registration Statement on Form S-3 (or any successor short form registration statement available for such resale that permits incorporation by reference at least to the same extent as such form) or, if a registration statement on Form S-3 is not then available to the Company, on such form of registration statement as is then available to effect a registration for resale of the Registrable Securities covering the resale of the number of Cutback Registrable Securities equal to the Cutback Required Registration Amount. To the extent the staff of the SEC does not permit all of the Cutback Registrable Securities to be registered on a Cutback Registration Statement, the Company shall file Cutback Registration Statements successively trying to register on each such Cutback Registration Statement the maximum number of remaining Cutback Registrable Securities until all of the Cutback Registrable Securities have been registered with the SEC. Each Cutback Registration Statement prepared pursuant hereto shall register for resale at least that number of shares of Common Stock equal to the Cutback Required Registration Amount as of the date such Cutback Registration Statement is initially filed with the SEC. The Company shall use best efforts to have each Cutback Registration Statement declared effective by the SEC as soon as reasonably practicable, but in no event later than the Cutback Effectiveness Deadline and shall use commercially reasonable efforts to keep the Cutback Registration Statement continuously effective under the 1933 Act until such date on which there are no longer any Registrable Securities covered by such Cutback Registration Statement.

c. Allocation of Registrable Securities. The number of Registrable Securities included in any Registration Statement shall be allocated pro rata among the Investors based on the number of Registrable Securities held by each Investor that are to be included in such Registration Statement (without giving effect to any limitations imposed by the SEC). In the event that an Investor sells or otherwise transfers any of such Investor's Registrable Securities, each transferee shall be allocated a pro rata portion of the then remaining number of Registrable Securities included in such Registration Statement for such transferor. Any Registrable Securities included in a Registration Statement and which remain allocated to any Person that ceases to hold any Registrable Securities covered by such Registration Statement shall be allocated to the remaining Investors, pro rata based on the number of Registrable Securities then held by such Investors which are covered by such Registration Statement.

d. Legal Counsel. The Required Holders shall have the right to select one legal counsel to review and oversee any registration pursuant to this Section 2, which legal counsel shall be reasonably acceptable to the Company ("**Legal Counsel**"). The Company shall reasonably cooperate with Legal Counsel in performing the Company's obligations under this Agreement.

e. Ineligibility for Form S-3. In the event that Form S-3 is not available for the registration of the resale of any Registrable Securities hereunder, the Company shall provide that any Registration Statement on Form S-1 filed hereunder shall incorporate documents by reference (including by way of forward incorporation by reference) to the maximum extent possible.

f. Sufficient Number of Shares Registered. In the event the number of shares available under a Registration Statement filed pursuant to Section 2(a) is insufficient to cover all of the Registrable Securities required to be covered by such Registration Statement or an Investor's allocated portion of the Registrable Securities pursuant to Section 2(c), the Company shall promptly inform each Investor whose Registrable Securities are not fully covered by such Registration Statement and, as soon as reasonably practicable, but in any event (other than with respect to Cutback Shares) not later than twenty (20) days after the necessity therefor arises, or (if later) the first date on which the Company is then permitted to file such Registration Statement by the SEC (a "**Subsequent Filing Deadline**") amend the applicable Registration Statement, or file a new Registration Statement (on the short form available therefor, if applicable), or both, so as to cover Registrable Securities consisting of at least that number of shares of Common Stock equal to 100% of the number of Registrable Securities as of two (2) trading days immediately preceding the date of the filing of such amendment or new Registration Statement. The Company shall use best efforts to cause such amendment and/or new Registration Statement to become effective as soon as reasonably practicable following the filing thereof, but in any event (other than with respect to Cutback Shares) not later than sixty (60) days following the filing thereof (a "**Subsequent Effectiveness Deadline**"). For purposes of the foregoing provision, the number of shares available under a Registration Statement shall be deemed "insufficient to cover all of the Registrable Securities" if as of any date of determination, the number of shares of Common Stock available for resale under the Registration Statement is less than 100% of the number of Registrable Securities.

g. Effect of Failure to File and Obtain and Maintain Effectiveness of Registration Statement.

i. If (A) a Registration Statement covering Registrable Securities and required to be filed by the Company pursuant to Section 2(a), Section 2(b) or Section 2(f) of this Agreement is not (I) filed with the SEC on or before the applicable Filing Deadline (a "**Filing Failure**") or (II) declared effective by the SEC on or before the applicable Effectiveness Deadline (an "**Effectiveness Failure**") or (B) on any day after a Registration Statement has been declared effective by the SEC, sales of all the Registrable Securities required to be included on such Registration Statement cannot be made (other than during an Allowable Grace Period (as defined in Section 3(o)(iv))) pursuant to such Registration Statement (including because of a failure to keep such Registration Statement effective, to disclose such information as is necessary for sales to be made pursuant to such Registration Statement or to comply with Section 2(f)) (a "**Maintenance Failure**," and each of a Filing Failure, an Effectiveness Failure and a Maintenance Failure being referred to as a "**Registration Default**"), then the Company shall pay, as partial liquidated damages (but not as a penalty) to any holder of Shares by reason of any such delay in or reduction of its ability to sell its Shares (which remedy shall be exclusive of any other remedies available at law or in equity), an amount in cash equal to one percent (1.0%) per month (on a 30/360 basis) of the aggregate purchase price paid pursuant to the Securities Purchase Agreement for such holder's Registrable Securities required to be included in such Registration Statement on each of the following dates: (1) the initial day of a Filing Failure and on every thirtieth (30th) day (prorated for periods totaling less than thirty (30) days) thereafter until such Filing Failure is cured; (2) the initial day of an Effectiveness Failure and on every thirtieth (30th) day (prorated for periods totaling less than thirty (30) days) thereafter until such Effectiveness Failure is cured; and (3) the initial day of a Maintenance Failure and on every thirtieth (30th) day (prorated for periods totaling less than thirty (30) days) thereafter until such Maintenance Failure is cured.

ii. The payments to which a holder shall be entitled pursuant to this Section 2(g) are referred to herein as "**Registration Delay Payments.**" In the event the Company fails to make Registration Delay Payments in a timely manner, such Registration Delay Payments shall bear interest at the rate of the lesser of one and one-half percent (1.5%) per month (on a 30/360 basis).

iii. A Registration Default shall be deemed not to have occurred and be continuing, and no Registration Delay Payments shall accrue as a result thereof, in relation to a Registration Statement if (i) (A) such Registration Default has occurred solely as a result of material events, with respect to the Company that would need to be described in such Registration Statement or the related Prospectus or (B) the Registration Default relates to any information supplied or failed to be supplied by a Buyer of Registrable Securities and (ii) the Company is proceeding promptly and in good faith to amend or supplement the Registration Statement to describe such events as required by Section 3(o); *provided, however*, that in any case if such Registration Default occurs for a continuous period in excess of forty-five (45) days beyond any permitted forty-five (45) or ninety (90) day suspension period (as provided by Section 3(o)), Registration Delay Payments shall be payable in accordance with this Section 2(g) from the day such Registration Default occurs until such Registration Default is cured.

3. **RELATED OBLIGATIONS.** At such time as the Company is obligated to file a Registration Statement with the SEC pursuant to Section 2(a), Section 2(b) or Section 2(f), the Company will use best efforts to effect the registration of the Registrable Securities in accordance with the intended method of disposition thereof and, pursuant thereto, the Company shall have the following obligations:

a. The Company shall promptly prepare and file with the SEC a Registration Statement with respect to the applicable Registrable Securities (but in no event later than the applicable Filing Deadline) and use best efforts to cause such Registration Statement relating to the Registrable Securities to become effective as soon as reasonably practicable after such filing (but in no event later than the applicable Effectiveness Deadline). The Company shall use commercially reasonable efforts to respond to written comments received from the SEC upon a review of a Registration Statement within fourteen (14) Business Days. If the Company is notified by the SEC that such Registration Statement will not be reviewed or will not be subject to further review and the effectiveness of such Registration Statement may be accelerated, the Company shall, subject to Section 3(c), file with the SEC a request for acceleration of effectiveness in accordance with Rule 461 promulgated under the 1933 Act within two (2) Business Days after the date that the Company is so notified by the SEC. No later than the second Business Day after such Registration Statement becomes effective, the Company will file with the SEC the final Prospectus included therein pursuant to Rule 424 (or successor thereto) promulgated under the 1933 Act. The Company shall keep each Registration Statement effective pursuant to Rule 415 at all times until the earlier of (i) the date as of which all of the Investors may sell all of the Registrable Securities covered by such Registration Statement pursuant to Rule 144 or an applicable exemption from registration under the 1933 Act without limitation, restriction or condition (including any current public information requirement) thereunder, (ii) the date on which the Investors have sold all of the Registrable Securities covered by such Registration Statement in accordance with such Registration Statement or pursuant to Rule 144 and (iii) the date that all Registrable Securities have ceased to be Registrable Securities (the "**Registration Period**"). Such Registration Statement shall contain a "plan of distribution" section and a "selling stockholder" section, in each case approved by Legal Counsel and no Investor shall be named as an "underwriter" in the Registration Statement without such Investor's prior written consent, except that an Investor may be named as a "statutory underwriter" if such Investor is, or is affiliated with, a broker dealer and states such fact in writing to the Company (unless such Investor represents in writing to the Company that (1) it purchased such securities in the ordinary course of business; and (2) at the time of purchase of the securities being registered for resale, the Investor had no agreements or understandings, directly or indirectly, with any person to distribute the securities), it being understood that if such consent is withheld that until such consent is given, or no longer required to be given for the registration of the Investor's Registrable Securities, such withholding of consent will waive the withholding Investor's right to have their Securities registered under this Agreement and such Investor will not be entitled to rely on any provision of Section 2(g). Such Registration Statement (including any amendments or supplements thereto and any Prospectuses (preliminary, final, summary or free writing)) contained therein or related thereto shall not contain any 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 light of the circumstances in which they were made, not misleading.

b. The Company shall prepare and file with the SEC such amendments (including post-effective amendments) and supplements to a Registration Statement and the Prospectus used in connection with such Registration Statement, as may be necessary to keep such Registration Statement effective at all times during the Registration Period, and, during such period, comply with the provisions of the 1933 Act with respect to the disposition of all Registrable Securities of the Company covered by such Registration Statement during the Registration Period. In the case of amendments and supplements to a Registration Statement which are required to be filed pursuant to this Agreement (including pursuant to this Section 3(b)) by reason of the Company filing a report on Form 8-K, Form 10-Q, Form 10-K or any analogous report under the 1934 Act, the Company shall have incorporated such report by reference into such Registration Statement, if applicable, or shall file such amendments or supplements with the SEC within two (2) Business Days after the 1934 Act report is filed which created the requirement for the Company to amend or supplement such Registration Statement. The Company shall promptly notify Legal Counsel of any request by the SEC or any other Governmental Authority, during the period of effectiveness of a Registration Statement, for amendments or supplements to such Registration Statement or related Prospectus or for additional information.

c. The Company shall, upon request, (A) permit Legal Counsel to review and comment upon (i) the Initial Registration Statement at least two (2) Business Days prior to its filing with the SEC, and (ii) all other Registration Statements and all amendments and supplements to all Registration Statements (except for annual reports on Form 10-K, quarterly reports on Form 10-Q, and current reports on Form 8-K, and any similar or successor reports) within two (2) Business Days prior to their filing with the SEC, and (B) not file any document, registration statement, amendment or supplement described in the foregoing clause (A) in a form to which Legal Counsel reasonably objects. The Company shall provide Legal Counsel one (1) Business Day notice prior to submitting any request for acceleration of the effectiveness of a Registration Statement or any amendment or supplement thereto. The Company shall promptly furnish to Legal Counsel copies of any correspondence from the SEC to the Company or its representatives relating to any Registration Statement and shall provide Legal Counsel the opportunity to review and comment upon the Company's responses to any such correspondence. The Company shall reasonably cooperate with Legal Counsel in performing the Company's obligations pursuant to this Section 3.

d. The Company shall furnish to each Investor, upon request, without charge, such documents, including copies of any Prospectus (preliminary, final, summary or free writing), as such Investor may reasonably request from time to time in order to facilitate the disposition of the Registrable Securities owned by such Investor.

e. The Company shall use best efforts to (i) register and qualify, unless an exemption from registration and qualification applies, the resale by the Investors of the Registrable Securities covered by a Registration Statement under the securities or applicable state blue sky or state securities laws ("**Blue Sky**") laws of all applicable jurisdictions in the United States, (ii) prepare and file in those jurisdictions, such amendments (including post-effective amendments) and supplements to such registrations and qualifications as may be necessary to maintain the effectiveness thereof during the Registration Period, (iii) take such other actions as may be necessary to maintain such registrations and qualifications in effect at all times during the Registration Period and (iv) take all other actions reasonably necessary or advisable to qualify the Registrable Securities for sale in such jurisdictions or obtain exemptions from the registration and qualification requirements of such jurisdictions; *provided, however*, that the Company shall not be required in connection therewith or as a condition thereto to (x) qualify to do business in any jurisdiction where it would not otherwise be required to qualify but for this Section 3(e), (y) subject itself to general taxation in any jurisdiction, or (z) file a general consent to service of process in any jurisdiction in which it is not currently so qualified or subject to general taxation or has not currently so consented. The Company shall promptly notify Legal Counsel of the receipt by the Company of any notification with respect to the suspension of the registration or qualification (or exemption from qualification) of any of the Registrable Securities for sale under the securities or Blue Sky laws of any jurisdiction in the United States or its receipt of actual notice of the initiation or threatening of any proceeding for such purpose.

f. The Company shall notify Legal Counsel of the happening of any event, as promptly as reasonably practicable after becoming aware of such event, as a result of which, in the case of a Registration Statement, it includes an untrue statement of a material fact or omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading and, in the case of the Prospectus included in a Registration Statement, it includes an untrue statement of a material fact or omission to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading which information shall be accompanied by an instruction to suspend the use of the Registration Statement and the Prospectus until the requisite changes have been made (provided that in each notice the Company shall not disclose any material non-public information to any Investor unless otherwise requested in writing by such Investor which Investor agrees in writing to hold such information in confidence until such time as it is disclosed in the Company's sole discretion), and, subject to Section 3(o), promptly prepare and file with the SEC a supplement or amendment to such Registration Statement to correct such untrue statement or omission, and deliver a copy of such supplement or amendment to Legal Counsel and each Investor (or such other number of copies as Legal Counsel or such Investor may reasonably request). The Company shall also promptly notify Legal Counsel and each Investor in writing (i) when a Prospectus or any Prospectus supplement or post-effective amendment has been filed, and when a Registration Statement or any post-effective amendment has become effective (promptly providing written notice of such effectiveness to each Investor), (ii) of any request by the SEC for amendments or supplements to a Registration Statement or related Prospectus or related information and (iii) of the Company's reasonable determination that a post-effective amendment to a Registration Statement would be appropriate. By 9:30 a.m. New York City time on the date following the date any post-effective amendment has become effective, the Company shall file with the SEC in accordance with Rule 424 under the 1933 Act the final Prospectus to be used in connection with sales pursuant to such Registration Statement.

g. The Company shall use commercially reasonable efforts to prevent the issuance of any stop order or other suspension of effectiveness of a Registration Statement (other than during an Allowable Grace Period, as defined below), or the suspension of the qualification of any of the Registrable Securities for sale in any jurisdiction and, if such an order or suspension is issued, to obtain the withdrawal of such order or suspension at the earliest possible time and to notify Legal Counsel of the issuance of such order or suspension and the resolution thereof or its receipt of actual notice of the initiation or threat of any proceeding for such purpose.

h. The Company shall hold in confidence and not make any disclosure of information concerning an Investor provided to the Company unless (i) disclosure of such information is necessary to comply with federal or state securities laws, (ii) the disclosure of such information is necessary to avoid or correct a misstatement or omission in any Registration Statement, (iii) the release of such information is ordered pursuant to a subpoena or order from a court or governmental body of competent jurisdiction, or (iv) such information has been made generally available to the public other than by disclosure in violation of this Agreement or any other agreement. The Company agrees that it shall, upon learning that disclosure of such information concerning an Investor is sought in or by a court or governmental body of competent jurisdiction or through other means, give prompt written notice to such Investor and allow such Investor, at the Investor's expense, to undertake appropriate action to prevent disclosure of, or to obtain a protective order for, such information.

i. The Company shall use commercially reasonable efforts to cause all the Registrable Securities covered by a Registration Statement to be listed on each securities exchange or trading market on which securities of the same class or series issued by the Company are listed, and with the same CUSIP. For the avoidance of doubt, and subject to Section 5, the Company shall pay all fees and expenses in connection with satisfying its obligation under this Section 3(i).

j. The Company shall cooperate with the Investors that hold Registrable Securities being offered and the underwriters, if any, and, to the extent applicable, facilitate the timely preparation and delivery of certificates (not bearing any restrictive legend) representing the Registrable Securities to be offered pursuant to a Registration Statement and enable such certificates to be in such names and denominations or amounts, as the case may be, and/or the timely issuance of the Registrable Securities to be offered pursuant to a Registration Statement through the Direct Registration System (DRS) of The Depository Trust Company (the "DTC") or crediting of the Registrable Securities to be offered pursuant to a Registration Statement to the applicable account (or accounts) with DTC through its Deposit/Withdrawal At Custodian (DWAC) system, in any such case as each Investor may reasonably request.

k. The Company shall provide a transfer agent and registrar for all such Registrable Securities not later than the effective date of the applicable Registration Statement.

l. If requested by an Investor, the Company shall (i) as soon as reasonably practicable, incorporate in a prospectus supplement or post-effective amendment such information as such Investor requests to be included therein relating to the sale and distribution of Registrable Securities, including information with respect to such Investor, the number of Registrable Securities being offered or sold, the purchase price being paid therefor and any other terms of the offering of the Registrable Securities to be sold in such offering; (ii) as soon as reasonably practicable, make all required filings of such prospectus supplement or post-effective amendment after being notified of the matters to be incorporated in such prospectus supplement or post-effective amendment; and (iii) as soon as reasonably practicable, supplement or amend any Registration Statement as reasonably requested by such Investor *provided, however*, that the Company will have no obligation to add Investors to the Initial Registration Statement or any subsequent Cutback Registration Statement as selling stockholders more frequently than one time per every forty-five (45) days.

m. The Company shall otherwise use best efforts to comply with all applicable rules and regulations of the SEC in connection with any registration hereunder.

n. Within two (2) Business Days after a Registration Statement which covers applicable Registrable Securities is declared effective by the SEC, the Company shall deliver to the transfer agent for such Registrable Securities (and provide written notice to the Investors whose Registrable Securities are included in such Registration Statement) confirmation that such Registration Statement has been declared effective by the SEC; *provided* that if the Company changes its transfer agent, it shall immediately deliver any previously delivered notices under this Section 3(n) and any subsequent notices to such new transfer agent.

o. To the extent not made by the underwriters in the case of an underwritten offering, the Company shall make such filings with the Financial Industry Regulatory Authority ("**FINRA**") pursuant to FINRA Rule 5110 or otherwise (including providing all required information and paying required fees thereto), as and when requested by any Investor, or in the case of an underwritten offering, by any underwriter, and make all other filings and take all other actions reasonably necessary to expedite and facilitate the disposition by the Investors of Registrable Securities pursuant to a Registration Statement, including promptly responding to any comments received from FINRA.

p. Grace Period.

i. Notwithstanding anything to the contrary in Section 3(f), and subject to the provisions of this Section 3(p) and a good faith determination by the Company that it is in the best interests of the Company to suspend the use of any Registration Statement, following the effectiveness of such Registration Statement (and the filings with any federal or state securities commissions), the Company, by written notice to the Investors, may direct the Investors to suspend sales of the Registrable Securities pursuant to such Registration Statement for such times as the Company reasonably may determine is necessary and advisable (a "**Grace Period**"), if any of the following events shall occur (each, a "**Grace Period Event**"):

- (1) there is material non-public information regarding the Company which (A) the Company determines not to be in the Company's best interest to disclose, (B) would, in the good faith determination of the Company, require any revisions to the Registration Statement so that it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, and (C) which the Company is not otherwise required to disclose;
- (2) there is a significant bona fide business opportunity (including, but not limited to, the acquisition or disposition of assets (other than in the ordinary course of business), including any significant merger, consolidation, tender offer or other similar transaction) available to the Company which the Company determines not to be in the Company's best interest to disclose; or
- (3) the Company is required to file a post-effective amendment to a Registration Statement to incorporate the Company's quarterly or annual reports or audited financial statements on Forms 10-Q and 10-K; *provided* that no Grace Period permitted pursuant to this clause (3) shall continue for more than five (5) consecutive Business Days.

ii. The Company shall (A) promptly provide written notice to the Investors of the occurrence giving rise to a Grace Period (provided that if such Grace Period occurs pursuant to Section 3(p)(i)(1) and 3(p)(i)(2), the Company shall not disclose the content of such material non-public information) and the date on which the Grace Period will begin (a "**Grace Period Notice**"), and (B) as soon as such date may be determined, promptly provide written notice to the Investors of the date on which the Grace Period ends (an "**End of Grace Period Notice**").

iii. Any Grace Period Notice shall state that such Grace Period shall continue only for so long as the Grace Period Event or its effect is continuing and that the Company is taking all reasonable steps to terminate suspension of the effectiveness of the Registration Statement as promptly as possible. The Investors shall not affect any sales of the Registrable Securities pursuant to such Registration Statement (or such filings) at any time after it has received a Grace Period Notice from the Company and prior to receipt of an End of Grace Period Notice. The Investors may recommence effecting sales of the Registrable Securities pursuant to the Registration Statement (or such filings) receipt of an End of Grace Period Notice from the Company, which notice shall be given by the Company promptly following the conclusion of any Grace Period Event.

iv. No Grace Period shall (A) exceed forty-five (45) consecutive days, (B) during any three hundred sixty-five (365) day period, exceed an aggregate of ninety (90) days, and (C) have its first day occur less than ten (10) trading days after the last day of any prior Grace Period (each Grace Period that satisfies all of the requirements of this Section 3(p)(iv) being referred to as an "**Allowable Grace Period**"). For purposes of determining the length of a Grace Period above, the Grace Period shall begin on and include the date the Investors receive a Grace Period Notice and shall end on and include the later of the date the Investors receive the End of Grace Period Notice and the date referred to in such notice. The provisions of Section 3(f) hereof shall not be applicable during the period of any Allowable Grace Period. Upon expiration of the Grace Period, the Company shall again be bound by the first sentence of Section 3(f) with respect to the information giving rise thereto unless such material non-public information is no longer applicable.

v. Upon the earlier to occur of (A) the Company delivering to the Investors an End of Grace Period Notice or (B) the end of the maximum permissible Grace Period, the Company shall use its commercially reasonable efforts to promptly amend or supplement the Registration Statement on a post-effective basis, if necessary, or to take such action as is necessary to make resumed use of the Registration Statement compatible with the Company's best interests, as applicable, so as to permit the Investors to resume sales of the Registrable Securities as soon as possible.

q. The Company shall enter into such customary agreements (including, in the case of underwritten offering, an underwriting agreement) and take such other actions as any of the Investors or underwriters, if any, may reasonably request in order to expedite and facilitate the disposition of the Registrable Securities covered by a Registration Statement.

4. OBLIGATIONS OF THE INVESTORS.

a. At least five (5) Business Days prior to the first anticipated filing date of a Registration Statement and at least three (3) Business Days prior to the filing of any amendment or supplement to a Registration Statement, the Company shall notify each Investor in writing of the information, if any, the Company requires from each such Investor if such Investor elects to have any of such Investor's Registrable Securities included in such Registration Statement or, with respect to an amendment or a supplement, if such Investor's Registrable Securities are included in such Registration Statement (each an "**Information Request**"). Provided that the Company shall have complied with its obligations set forth in the preceding sentence, 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, at least three (3) Business Days prior to the anticipated filing date, such Investor shall furnish to the Company, in response to an Information Request, 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 registration of such Registrable Securities.

b. Each Investor, by such Investor's 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 any Registration Statement hereunder, unless such Investor has notified the Company in writing of such Investor's election to exclude all of such Investor's Registrable Securities from such Registration Statement.

c. Each Investor agrees that, upon receipt of any notice from the Company of the happening of any event of the kind described in Section 3(f), Section 3(g), or Section 3(o), such Investor will discontinue disposition of Registrable Securities pursuant to any Registration Statement(s) covering such Registrable Securities until such Investor's receipt of the copies of the supplemented or amended Prospectus contemplated by Section 3(f) or receipt of notice from the Company in writing that no supplement or amendment is required or that the Allowable Grace Period has ended. Notwithstanding anything to the contrary, the Company shall cause its transfer agent to deliver unlegended shares of Common Stock to a transferee of an Investor in connection with any sale of Registrable Securities with respect to which an Investor has entered into a contract for sale prior to the Investor's receipt of a notice from the Company of the happening of any event of the kind described in Section 3(f), Section 3(g) or Section 3(o) and for which the Investor has not yet settled.

5. **EXPENSES OF REGISTRATION.** All expenses, other than underwriting discounts and commissions, incurred in connection with registrations, filings or qualifications pursuant to Sections 2 and 3, including all registration, listing, FINRA, Blue Sky and qualifications fees, printers and accounting fees, and fees and disbursements of counsel for the Company, as well as all other costs and expenses incurred in connection with the Company's compliance with its obligations under this Agreement, shall be paid by the Company. Each Investor shall pay all fees and disbursements of its counsel and all underwriting discounts and commissions, broker or similar fees and transfer taxes, if any, relating to the sale or disposition of such Investor's Registrable Securities.

6. **INDEMNIFICATION.** In the event any Registrable Securities are included in a Registration Statement:

a. **By the Company.** To the fullest extent permitted by law, the Company will, and hereby does, indemnify, hold harmless and defend each Investor, their respective directors, officers, managers, employees and agents, and each Person, if any, who controls any Investor within the meaning of the 1933 Act or the 1934 Act (each, an "**Indemnified Person**"), against any losses, claims, damages, liabilities, judgments, fines, penalties, charges, costs, reasonable and documented attorneys' fees, amounts paid in settlement, joint or several, and any reasonable and documented expenses (collectively, "**Indemnified Damages**"), incurred in investigating, preparing or defending any action, claim, suit, proceeding, investigation or appeal taken from the foregoing by or before any court or Governmental Authority or other administrative or regulatory agency or body (including the SEC and any state commission or authority or self-regulatory organization or securities exchange in the United States or elsewhere), whether pending or threatened (each, a "**Claim**" and collectively, "**Claims**"), to which any of them may become subject insofar as such Claim (or actions or proceedings, whether commenced or threatened, in respect thereof) or Indemnified Damages arise out of or are based upon: (i) any untrue statement or alleged untrue statement of a material fact in a Registration Statement or any post-effective amendment thereto or in any filing made in connection with the qualification of the offering under the securities or other Blue Sky laws of any jurisdiction in which Registrable Securities are offered, or the omission or alleged omission to state a material fact required to be stated therein or necessary to make the statements made therein not misleading, (ii) any untrue statement or alleged untrue statement of a material fact contained in any Prospectus, including any preliminary Prospectus, free writing Prospectus or final Prospectus (as amended or supplemented, if the Company files any amendment thereof or supplement thereto, and including all information incorporated by reference therein), or the omission or alleged omission to state therein any material fact necessary to make the statements made therein, in the light of the circumstances under which they were made, not misleading or (iii) any violation or alleged violation by the Company of the 1933 Act, the 1934 Act, any other law, including any state securities law, or any rule or regulation thereunder relating to the offer or sale of the Registrable Securities pursuant to a Registration Statement (the matters in the foregoing clauses (i) through (iii) being, collectively, "**Violations**"). Subject to Section 6(c), the Company shall reimburse the Indemnified Persons, promptly as such expenses are incurred and are due and payable, for any legal fees or other reasonable and documented expenses incurred by them in connection with investigating or defending any such Claim. Notwithstanding anything to the contrary contained herein, the indemnification agreement contained in this Section 6(a): (x) shall not apply to a Claim or Indemnified Damages sought by an Indemnified Person to the extent arising out of or based upon a Violation which occurs in reliance upon and in conformity with information furnished in writing to the Company by such Indemnified Person expressly for use in connection with the preparation of the Registration Statement or any such amendment thereof or supplement thereto; and (y) shall not apply to amounts paid in settlement of any Claim if such settlement is effected without the prior written consent of the Company, which consent shall not be unreasonably withheld, conditioned or delayed. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of the Indemnified Person and shall survive any transfer of Registrable Securities by any Investor pursuant to Section 9.

b. By the Investors. In connection with any Registration Statement in which an Investor's Registrable Securities are included, each such Investor agrees to severally and not jointly indemnify, hold harmless and defend the Company, each of its directors, each of its officers who signs the Registration Statement, and each Person, if any, who controls the Company within the meaning of the 1933 Act or the 1934 Act (each an "**Indemnified Party**"), to the same extent and in the same manner as is set forth in Section 6(a) with respect to the Indemnified Persons, against any Claim or Indemnified Damages to which any of them may become subject insofar as such Claim or Indemnified Damages arise out of or are based upon any Violation, to the extent, and only to the extent, that such Violation occurs in reliance upon and in conformity with written information furnished to the Company by such Investor expressly for use in connection with the preparation of the Registration Statement or any amendment thereof or supplement thereto; and, subject to Section 6(c), such Investor will reimburse any legal or other expenses reasonably incurred by an Indemnified Party in connection with investigating or defending any such Claim; *provided, however,* that the indemnity agreement contained in this Section 6(b) and the agreement with respect to contribution contained in Section 7 shall not apply to amounts paid in settlement of any Claim or Indemnified Damages if such settlement is effected without the prior written consent of such Investor, which consent shall not be unreasonably withheld; *provided, further,* that an Investor shall be liable under this Section 6(b) for only that amount of a Claim or Indemnified Damages as does not exceed the net proceeds to such Investor as a result of the sale of Registrable Securities pursuant to the Registration Statement giving rise to such indemnification obligation. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of such Indemnified Party and shall survive any transfer of Registrable Securities by any Investor pursuant to Section 9.

c. Notice. Promptly after receipt by an Indemnified Person or Indemnified Party under this Section 6 of the written threat of or notice of the commencement of any action or proceeding (including any governmental action or proceeding) involving a Claim or Indemnified Damages, such Indemnified Person or Indemnified Party shall, if a Claim in respect thereof is to be made against any indemnifying party under this Section 6, promptly deliver to the indemnifying party a written notice of the written threat of or notice of the commencement of such action or proceeding; *provided* that failure to so notify the indemnifying party will not relieve the indemnifying party from any liability it may have to such indemnified party hereunder except to the extent that the indemnifying party is materially prejudiced by such failure. Such notice shall state the nature and the basis of such Claim to the extent then known. In case any such action or proceeding is brought against any Indemnified Party or Indemnified Person and such Indemnified Party or Indemnified Person seeks or intends to seek indemnity from an indemnifying party, the indemnifying party shall have the right to participate in, and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume control of the defense thereof with counsel mutually satisfactory to the indemnifying party and the Indemnified Person or the Indemnified Party, as the case may be. In any such proceeding, any Indemnified Person or Indemnified Party may retain its own counsel, but the fees and expenses of that counsel will be at the expense of that Indemnified Person or Indemnified Party, as the case may be, unless (i) the indemnifying party and the Indemnified Person or Indemnified Party, as applicable, shall have mutually agreed to the retention of that counsel, (ii) the indemnifying party does not assume the defense of such proceeding in a timely manner or (iii) in the opinion of counsel retained by the Indemnified Person or Indemnified Party, as applicable, the representation by such counsel for the Indemnified Person or Indemnified Party, as applicable, and the indemnifying party would be inappropriate due to actual or potential differing interests between such Indemnified Person or Indemnified Party and any other party represented by counsel to the indemnifying party in such proceeding. The Indemnified Party or Indemnified Person shall reasonably cooperate with the indemnifying party in connection with any negotiation or defense of any such action or proceeding or Claim or Indemnified Damages by the indemnifying party and shall furnish to the indemnifying party all information reasonably available to the Indemnified Party or Indemnified Person which relates to such action, proceeding or Claim or Indemnified Damages. The indemnifying party shall keep the Indemnified Party or Indemnified Person fully apprised at all times as to the status of the defense or any settlement negotiations with respect thereto. No indemnifying party shall, without the prior written consent of the Indemnified Party or Indemnified Person, as the case may be, consent to entry of any judgment or enter into any settlement or other compromise with respect to any pending or threatened action or claim in respect of which indemnification or contribution may be or has been sought hereunder (whether or not the Indemnified Party or Indemnified Person is an actual or potential party to such action or claim) which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party or Indemnified Person (as applicable) of a full release from all liability with respect to such Claim or Indemnified Damages or which includes any admission as to fault or culpability on the part of such Indemnified Party or Indemnified Person. The failure to deliver written notice to the indemnifying party within a reasonable time of the commencement of any such action or proceeding shall not relieve such indemnifying party of any liability to the Indemnified Person or Indemnified Party under this Section 6, except to the extent that the indemnifying party is materially prejudiced in its ability to defend such action or proceeding as a result of such failure.

d. The indemnification required by this Section 6 shall be made by periodic payments of the amount thereof during the course of the investigation or defense, as and when bills are received or Indemnified Damages are incurred. The Indemnified Party or Indemnified Person shall promptly reimburse the indemnifying party for that portion of such fees and expenses applicable to such actions for which such Indemnified Party or Indemnified Person is finally judicially determined to not be entitled to indemnification hereunder.

e. The indemnity agreements contained herein shall be in addition to (i) any cause of action or similar right of the Indemnified Party or Indemnified Person against the indemnifying party or others, and (ii) any liabilities the indemnifying party may be subject to pursuant to the law.

7. **CONTRIBUTION.** To the extent any indemnification by an indemnifying party is prohibited or limited by law, the indemnifying party agrees to make the maximum contribution with respect to any amounts for which it would otherwise be liable under Section 6 to the fullest extent permitted by law; *provided, however*, that: (i) no Person involved in the sale of Registrable Securities which Person is guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the 1933 Act) in connection with such sale shall be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation; and (ii) contribution by any seller of Registrable Securities shall be limited in amount to the net amount of proceeds received by such seller from the sale of such Registrable Securities pursuant to such Registration Statement, less the amount of any damages that such Investor has otherwise been required to pay in connection with such sale.

8. **REPORTS UNDER THE 1934 ACT.** With a view to making available to the Investors the benefits of Rule 144, the Company agrees to use commercially reasonable efforts to:

a. make and keep public information available, as those terms are understood and defined in Rule 144;

b. file with the SEC in a timely manner all reports and other documents required of the Company under the 1934 Act so long as the Company remains subject to such requirements (it being understood that nothing herein shall limit the Company's obligations under Section 4(c) of the Securities Purchase Agreement) and the filing of such reports and other documents is required for the applicable provisions of Rule 144; and

c. furnish to each Investor, unless otherwise available at no charge by access electronically to the SEC's Electronic Data Gathering, Analysis, and Retrieval system (or successor thereto), so long as such Investor owns Registrable Securities, promptly upon request, (i) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company and (ii) such other information as may be reasonably requested to permit the Investors to sell such securities pursuant to Rule 144 without registration.

9. **ASSIGNMENT OF REGISTRATION RIGHTS.** The rights under this Agreement shall be automatically assignable by the Investors to any transferee of all or any portion of Registrable Securities if: (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; (ii) the Company is furnished with written notice within three (3) Business Days 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 and applicable state securities laws; (iv) the transferee or assignee agrees in writing with the Company to be bound by all of the provisions contained herein; and (v) the transferee is an "accredited investor," as that term is defined in Rule 501 of Regulation D.

10. AMENDMENT OF REGISTRATION RIGHTS. Provisions of this Agreement may be amended and the observance thereof may be waived (either generally or in a particular instance and either retroactively or prospectively), only with the written consent of the Company and the Required Holders. Any amendment or waiver effected in accordance with this Section 10 shall be binding upon each Investor and the Company. No such amendment shall be effective to the extent that it applies to less than all of the holders of the Registrable Securities. No consideration shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of any of this Agreement unless the same consideration also is offered to each of the Investors. Notwithstanding the foregoing, a waiver or consent to or departure from the provisions hereof with respect to a matter that relates exclusively to the rights of an Investor whose securities are being sold pursuant to a Registration Statement and that does not directly or indirectly affect, impair, limit or compromise the rights of other Investors may be given solely by such Investor.

11. MISCELLANEOUS.

a. A Person is deemed to be a holder of Registrable Securities (or a transferee or assignee of Registrable Securities, as applicable) whenever such Person owns or is deemed to own of record such Registrable Securities. If the Company receives conflicting instructions, notices or elections from two or more Persons with respect to the same Registrable Securities, the Company shall act upon the basis of instructions, notice or election received from the registered owner of such Registrable Securities.

b. Any notices, consents, waivers or other communications required or permitted to be given under the terms of this Agreement must be in writing and will be deemed to have been delivered upon receipt, when delivered via email, personally or by a nationally recognized overnight delivery service, in each case properly addressed to the party to receive the same. The addresses for such communications shall be:

If to the Company:

Applied Therapeutics, Inc.
545 Fifth Avenue, Suite 1400
New York, New York 10017
Attention: Chief Executive Officer

With copy to:

Skadden, Arps, Slate, Meagher & Flom LLP
One Manhattan West
New York, New York 10001
Attention: Michael Schwartz

If to Investors, at the most current address given by the transfer agent and registrar of the Shares of the Company.

- c. Failure of any party to exercise any right or remedy under this Agreement or otherwise, or delay by a party in exercising such right or remedy, shall not operate as a waiver thereof.
- d. All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of New York or any other jurisdiction) that would cause the application of the laws of any jurisdiction other than the State of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the courts of New York for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof to such party at the address for such notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. If any provision of this Agreement shall be invalid or unenforceable in any jurisdiction, such invalidity or unenforceability shall not affect the validity or enforceability of the remainder of this Agreement in that jurisdiction or the validity or enforceability of any provision of this Agreement in any other jurisdiction. EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HERewith OR ARISING OUT OF THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.
- e. This Agreement and the other documents executed in contemplation thereof (the "**Transaction Documents**") constitute the entire agreement among the parties hereto with respect to the subject matter hereof and thereof. There are no restrictions, promises, warranties or undertakings, other than those set forth or referred to herein and therein. This Agreement and the other Transaction Documents supersede all prior agreements and understandings among the parties hereto with respect to the subject matter hereof and thereof.
- f. Subject to the requirements of Section 9, this Agreement shall inure to the benefit of and be binding upon the permitted successors and assigns of each of the parties hereto.
- g. The headings in this Agreement are for convenience of reference only and shall not limit or otherwise affect the meaning hereof.

h. This Agreement and any amendments hereto may be executed and delivered in one or more counterparts, and by the different parties hereto in separate counterparts, each of which when executed shall be deemed to be an original, but all of which taken together shall constitute one and the same agreement, and shall become effective when counterparts have been signed by each party hereto and delivered to the other parties hereto, it being understood that all parties need not sign the same counterpart. In the event that any signature to this Agreement or any amendment hereto is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or ".pdf" signature page were an original thereof. No party hereto shall raise the use of a facsimile machine or e-mail delivery of a ".pdf" format data file to deliver a signature to this Agreement or any amendment hereto or the fact that such signature was transmitted or communicated through the use of a facsimile machine or e-mail delivery of a ".pdf" format data file as a defense to the formation or enforceability of a contract and each party hereto forever waives any such defense.

i. Each party shall do and perform, or cause to be done and performed, all such further acts and things, and shall execute and deliver all such other agreements, certificates, instruments and documents, as the other party may reasonably request in order to carry out the intent and accomplish the purposes of this Agreement and the consummation of the transactions contemplated hereby.

j. All consents and other determinations to be made by the Investors pursuant to this Agreement shall be made, unless otherwise specified in this Agreement, by the Required Holders. Any consent or other determination approved by Investors as provided in the immediately preceding sentence shall be binding on all Investors.

k. The language used in this Agreement will be deemed to be the language chosen by the parties to express their mutual intent and no rules of strict construction will be applied against any party.

l. Each Buyer and each holder of the Registrable Securities shall have all rights and remedies set forth in the Transaction Documents and all rights and remedies that such Buyers and holders have been granted at any time under any other agreement or contract and all of the rights that such Buyers and holders have under any law. Any Person having any rights under any provision of this Agreement shall be entitled to enforce such rights specifically (without posting a bond or other security or proving actual damages), to recover damages by reason of any breach of any provision of this Agreement and to exercise all other rights granted by law.

m. This Agreement is intended for the benefit of the parties hereto and their respective permitted successors and assigns and, to the extent provided in Sections 6 and 7 hereof, each Indemnified Person and Indemnified Party, and is not for the benefit of, nor may any provision hereof be enforced by, any other Person.

n. From the date hereof, the Company shall not grant any Person any registration rights with respect to shares of Common Stock or any other securities of the Company other than registration rights that will not adversely affect the rights of the Investors hereunder (including by limiting in any way the number of Registrable Securities that could be included in any Registration Statement pursuant to Rule 415) and shall not otherwise enter into any agreement that is inconsistent with the rights granted to the Investors hereunder.

o. The Company shall have no further obligations pursuant to this Agreement at the earlier of (i) such time as no Registrable Securities are outstanding and (ii) such time as the Registrable Securities covered by the Registration Statement that are not held by Affiliates of the Company are, as determined by the Company, eligible for resale pursuant to Rule 144 without limitation, restriction or condition (including any current public information requirement thereunder); provided, in each case, however, that the Company's obligations under Sections 6 and 11 of this Agreement shall remain in full force and effect following such time.

p. The obligations of each Investor hereunder are several and not joint with the obligations of any other Investor, and no provision of this Agreement is intended to confer any obligations on any Investor vis-à-vis any other Investor. Nothing contained herein, and no action taken by any Investor pursuant hereto, 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 herein.

q. Unless the context otherwise requires, (a) all references to Sections, Schedules or Exhibits are to Sections, Schedules or Exhibits contained in or attached to this Agreement, (b) each accounting term not otherwise defined in this Agreement or the Securities Purchase Agreement has the meaning assigned to it in accordance with GAAP, (c) words in the singular or plural include the singular and plural, and pronouns stated in either the masculine, the feminine or neuter gender shall include the masculine, feminine and neuter and (d) the use of the word "including" in this Agreement shall be by way of example rather than limitation.

* * * * *

IN WITNESS WHEREOF, the parties have caused this Registration Rights Agreement to be duly executed as of the date first above written.

COMPANY:

APPLIED THERAPEUTICS, INC.

By: /s/ Shoshana Shendelman

Name: Shoshana Shendelman

Title: Chief Executive Officer

[Signature Page to Registration Rights Agreement]

NAME OF BUYER:

VENROCK HEALTHCARE CAPITAL PARTNERS EG, L.P.

By: /s/ Sherman Souther

Name: Sherman Souther

Title: Authorized Signatory

[Signature Page to Registration Rights Agreement]

NAME OF BUYER:

VENROCK HEALTHCARE CAPITAL PARTNERS III, L.P.

By: VHCP Management III, LLC, its general partner
VR Adviser, LLC, its manager

By: /s/ Sherman Souther

Name: Sherman Souther

Title: Authorized Signatory

[Signature Page to Registration Rights Agreement]

NAME OF BUYER:

VHCP CO-INVESTMENT HOLDINGS III, LLC

By: VHCP Management III, LLC, its manager
VR Adviser, LLC, its manager

By: /s/ Sherman Souther

Name: Sherman Souther

Title: Authorized Signatory

[Signature Page to Registration Rights Agreement]

BUYERS:

NAME OF BUYER:

Richard and Suzanne Kayne Living Trust dtd 1/14/1999

By: /s/ Richard Kayne

Name: Richard Kayne

Title: Trustee

[Signature Page to Registration Rights Agreement]

NAME OF BUYER:

PROPEL BIO PARTNERS L.P.

By: Propel Bio Partners LLC, its general partner

By: /s/ Leen Kawas

Name: Leen Kawas

Title: Managing Member

[Signature Page to Registration Rights Agreement]

NAME OF BUYER:

PB SPV- I LLC

By: Propel Bio Partners LLC, its managing member

By: /s/ Leen Kawas

Name: Leen Kawas

Title: Managing Member

[Signature Page to Registration Rights Agreement]

NAME OF BUYER:

Franklin Templeton Investment Funds – Franklin Biotechnology Discovery Fund

By: Franklin Advisers, Inc., as investment manager

By: /s/ Evan McCulloch

Name: Evan McCulloch

Title: Senior Vice President

[Signature Page to Registration Rights Agreement]

NAME OF BUYER:

Franklin Strategic Series – Franklin Biotechnology Discovery Fund

By: Franklin Advisers, Inc., as investment manager

By: /s/ Evan McCulloch

Name: Evan McCulloch

Title: Senior Vice President



Applied Therapeutics Announces Clinical Benefit of Govorestat (AT-007) in ACTION-Galactosemia Kids Trial; Company Plans to Meet with FDA Regarding Potential NDA Submission

- Govorestat demonstrated consistent long-term clinical outcomes benefit across a range of functional measures in the ACTION-Galactosemia Kids trial, confirming prior biomarker data
 - Govorestat treatment improved activities of daily living, behavior, cognition, fine motor skills, adaptive skills and tremor vs. placebo
- Company plans to request a pre-NDA meeting with the FDA as soon as possible to discuss a potential NDA submission in second half of 2023; plans to submit a Marketing Authorization Application (MAA) with the European Medicines Agency (EMA) in mid-2023

NEW YORK, April 24, 2023 - Applied Therapeutics, Inc. (Nasdaq: APLT), a clinical-stage biopharmaceutical company developing a pipeline of novel drug candidates against validated molecular targets in indications of high unmet medical need, today announced results from the ACTION-Galactosemia Kids study of govorestat (AT-007), a novel, oral, small molecule, central nervous system (CNS) penetrant Aldose Reductase inhibitor (ARI).

“We believe Govorestat has demonstrated compelling evidence of clinical benefit alongside a favorable safety profile in patients with Galactosemia,” said Shoshana Shendelman, PhD, CEO, Founder and Chair of the Board of Applied Therapeutics. “We look forward to working collaboratively with regulators to ensure that this important treatment is available to patients with Galactosemia as quickly as possible. We plan to request a pre-NDA meeting with the FDA, and we have already received feedback from the EMA supportive of a submission in Europe.”

“Govorestat has demonstrated consistent results on improvement in galactitol biomarker levels in both adults and children and on long-term clinical and functional outcomes in children with Galactosemia,” said Riccardo Perfetti, MD, PhD, Chief Medical Officer of Applied Therapeutics. “We would like to thank all of the patients, investigators, and caregivers who participated in the ACTION-Galactosemia Kids study.”

“In the ACTION-Galactosemia Kids trial, treatment with govorestat affected clinically meaningful aspects of the disease, including activities of daily living, behavioral symptoms, cognition, adaptive skills and tremor,” said Janet Thomas, MD, Director of Clinical Research, Section of Clinical Genetics and Metabolism, Children’s Hospital Colorado. “This is exciting news. Until now, physicians have had no pharmacological options available for Galactosemia, and I look forward to being able to provide this therapy to my patients in the future.”

“The Galactosemia community has been waiting for a treatment for a long time, and we are thrilled with the results from the ACTION-Galactosemia Kids trial. Govorestat clearly improves critical characteristics of this disease - like our children’s abilities to feed themselves, dress themselves, understand what they are being taught in school, interact with other children - all of which impact our daily lives.” said Brittany Cudzilo, Vice President of the Galactosemia Foundation.

The ACTION-Galactosemia Kids Phase 3 study was designed to evaluate the impact of govorestat treatment vs. placebo on clinical outcomes over time in 47 children age 2-17 with Galactosemia. The primary endpoint, the Global Statistical Test, was a composite sum of change comprised of four endpoints: OWLS-2 Oral Expression (OE), OWLS-2 Listening Comprehension (LC), BASC-3 Behavior Symptoms Index (BSI) and the BASC-3 Activities of Daily Living (ADL). An additional pre-specified sensitivity analysis included cognition in the primary endpoint (NIH-Toolbox Cognition Battery). Additional clinical outcomes were assessed as secondary endpoints, including adaptive skills and tremor. Clinical outcomes were assessed every 6 months by a firewalled independent Data Monitoring Committee (DMC).

- Treatment with govorestat demonstrated consistent and sustained clinical benefit on activities of daily living, behavioral symptoms, cognition, adaptive behavior and tremor.
- While statistical significance defined as a p value of <0.05 was not met on the primary endpoint, systematic improvement over time was demonstrated for the overall primary endpoint ($p=0.1030$) and for a pre-specified sensitivity analyses including cognition ($p=0.0698$).
- Individual speech and language components of the primary endpoint were not impacted, which is suspected to be due to lack of progression in the placebo group and concomitant speech therapy received by almost all children in the trial. Of note, patients with severe speech deficits showed a favorable trend towards improvement with govorestat vs. placebo.
- A post-hoc analysis of the global statistical test including behavior and activities of daily living but excluding speech & language components (OWLS-OE and OWLS-LC) demonstrated a highly statistically significant benefit of active treatment vs. placebo ($p=0.0205$), which strengthened over time.
- Govorestat provided a statistically significant benefit on tremor at 18 months ($p=0.0428$), as measured by the Archimedes Spiral Drawing Test, and adaptive skills as assessed by the BASC-3 Adaptive Skills Index ($p=0.0265$).
- Consistent with prior reported data, improvement in galactitol levels was sustained throughout the trial with no impact on Gal-1p or galactose, further establishing the causal role of galactitol in disease pathogenesis.
- Govorestat continued to be safe and well-tolerated in all age groups; there were no treatment-related serious adverse events (SAEs) reported.

This data will be submitted for presentation at an upcoming medical conference.

The Company believes that there is compelling evidence of clinical efficacy and plans to move toward registration of govorestat for Galactosemia. The trial will be unblinded and placebo patients will be crossed to active treatment.

The Company will host a conference call to discuss the results today at 8:30am Eastern.

To access the conference call, please dial (833) 630-1956 (local) or (412) 317-1837 (international) at least 10 minutes prior to the start time and ask to be joined into the Applied Therapeutics call. A live webcast of the call will be accessible on the Events page under the Investor Relations section of the Applied Therapeutics website at www.appliedtherapeutics.com. A replay will be available on the Company's website approximately two hours after the event.

About Galactosemia

Galactosemia is a rare genetic metabolic disease resulting in an inability to metabolize the simple sugar galactose. Galactose is found in foods, but is also produced endogenously by the body. When not metabolized properly, galactose is converted to the toxic metabolite, galactitol, which causes neurological complications, including deficiencies in speech, cognition, behavior, and motor skills, and also results in juvenile cataracts and ovarian insufficiency (in women). There are approximately 3,000 patients with Galactosemia in the US and 80 new births per year, and approximately 4,000 patients with Galactosemia in the EU and 120 new births per year.

About Govorestat (AT-007)

Govorestat is a central nervous system (CNS) penetrant Aldose Reductase inhibitor (ARI) in development for the treatment of several rare neurological diseases, including Galactosemia, SORD Deficiency, and PMM2-CDG.

In a study in children with Galactosemia aged 2-17, treatment with govorestat demonstrated clinical benefit on activities of daily living, behavioral symptoms, cognition, fine motor skills and tremor. Govorestat also significantly reduced plasma galactitol levels in both adults and children with Galactosemia. Galactitol is a toxic metabolite responsible for tissue damage and long-term complications in Galactosemia.

Govorestat is also being studied in the ongoing Phase 3 INSPIRE trial, which is evaluating the effect of AT-007 vs. placebo in patients with SORD Deficiency on sorbitol reduction as well as clinical outcomes in approximately 50 patients aged 16-55 in the US and Europe. In an interim analysis, govorestat reduced sorbitol by a mean of 52%, or approximately 16,000 ng/ml, over a 90-day period, which was highly statistically significant vs. placebo ($p < 0.001$).

Govorestat has received Orphan Medicinal Product Designation from the European Medicines Agency (EMA) for both Galactosemia and SORD Deficiency. Govorestat has also received Orphan Drug Designation from the U.S. Food and Drug Administration (FDA) for the treatment of Galactosemia, PMM2-CDG, and SORD Deficiency; Pediatric Rare Disease designation for Galactosemia and PMM2-CDG; and Fast Track designation for Galactosemia.

About Applied Therapeutics

Applied Therapeutics is a clinical-stage biopharmaceutical company developing a pipeline of novel drug candidates against validated molecular targets in indications of high unmet medical need. The Company's lead drug candidate, govorestat, is a novel central nervous system penetrant Aldose Reductase Inhibitor (ARI) for the treatment of CNS rare metabolic diseases, including Galactosemia, SORD Deficiency, and PMM2-CDG. The Company is also developing AT-001, a novel potent ARI, for the treatment of Diabetic Cardiomyopathy, or DbCM, a fatal fibrosis of the heart. The preclinical pipeline also includes AT-003, an ARI designed to cross through the back of the eye when dosed orally, for the treatment of Diabetic retinopathy.

To learn more, please visit www.appliedtherapeutics.com and follow the company on Twitter @Applied_Tx.

Forward-Looking Statements

This press release contains “forward-looking statements” that involve substantial risks and uncertainties for purposes of the safe harbor provided by the Private Securities Litigation Reform Act of 1995. Any statements, other than statements of historical fact, included in this press release regarding the strategy, future operations, prospects, plans and objectives of management, including words such as “may,” “will,” “expect,” “anticipate,” “plan,” “intend,” “predicts” and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) are forward-looking statements. These include, without limitation, statements regarding (i) the Company’s plans to request a pre-NDA meeting with the FDA to discuss a potential NDA submission in the second half of 2023; plans to submit a Marketing Authorization Application (MAA) with the European Medicines Agency (EMA) in mid-2023 and (ii) the Company’s belief with respect to the clinical benefits of govorestat. Forward-looking statements in this release involve substantial risks and uncertainties that could cause actual results to differ materially from those expressed or implied by the forward-looking statements, and we, therefore cannot assure you that our plans, intentions, expectations or strategies will be attained or achieved.

Such risks and uncertainties include, without limitation, (i) our plans to develop, market and commercialize our product candidates, (ii) the initiation, timing, progress and results of our current and future preclinical studies and clinical trials and our research and development programs, (iii) our ability to take advantage of expedited regulatory pathways for any of our product candidates, (iv) our estimates regarding expenses, future revenue, capital requirements and needs for additional financing, (v) our ability to successfully acquire or license additional product candidates on reasonable terms and advance product candidates into, and successfully complete, clinical studies, (vi) our ability to maintain and establish collaborations or obtain additional funding, (vii) our ability to obtain and timing of regulatory approval of our current and future product candidates, (viii) the anticipated indications for our product candidates, if approved, (ix) our expectations regarding the potential market size and the rate and degree of market acceptance of such product candidates, (x) our ability to fund our working capital requirements and expectations regarding the sufficiency of our capital resources, (xi) the implementation of our business model and strategic plans for our business and product candidates, (xii) our intellectual property position and the duration of our patent rights, (xiii) developments or disputes concerning our intellectual property or other proprietary rights, (xiv) our expectations regarding government and third-party payor coverage and reimbursement, (xv) our ability to compete in the markets we serve, (xvi) the impact of government laws and regulations and liabilities thereunder, (xvii) developments relating to our competitors and our industry, (xviii) our ability to achieve the anticipated benefits from the agreements entered into in connection with our partnership with Advanz Pharma and (xiv) other factors that may impact our financial results. In light of the significant uncertainties in these forward-looking statements, you should not rely upon forward-looking statements as predictions of future events. Although we believe that we have a reasonable basis for each forward-looking statement contained in this press release, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur at all. Factors that may cause actual results to differ from those expressed or implied in the forward-looking statements in this press release are discussed in our filings with the U.S. Securities and Exchange Commission, including the “Risk Factors” contained therein. Except as otherwise required by law, we disclaim any intention or obligation to update or revise any forward-looking statements, which speak only as of the date they were made, whether as a result of new information, future events or circumstances or otherwise.

Contacts

Investors:

Maeve Conneighton
(212) 600-1902
appliedtherapeutics@argotpartners.com

Media:

media@appliedtherapeutics.com

Applied Therapeutics, Inc.



**ACTION-Galactosemia Kids
(AT-007-1002)
Clinical Trial Update**

April 24, 2023



Disclaimer

The information contained herein is strictly confidential and is being provided to you solely for your information and to assist you in making your own evaluation of Applied Therapeutics, Inc. (the "Company"). For the purposes of this disclaimer, the presentation includes all statements made orally by any representative or advisor of the Company at any meeting where the slides accompanying this disclaimer are provided as well as the slides themselves. Your acceptance of these materials constitutes your agreement to hold the information contained herein in strict confidence. This presentation has been prepared for informational purposes only. By attending or receiving this presentation you acknowledge that you will conduct your own analysis and be solely responsible for forming your own view of the potential future performance of our business. This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 about the Company that involve substantial risks and uncertainties. All statements, that are not statements of historical fact, regarding the strategy, future operations, prospects, plans and objectives of management, including words such as "may," "will," "expect," "anticipate," "plan," "intend," and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) are forward-looking statements. The Company cautions that these statements are subject to a number of known and unknown risks, uncertainties and other factors, many of which are beyond the Company's ability to control or predict, and any forward-looking statements in this presentation and any accompanying oral presentation are not a guarantee of future performance and actual results may differ materially from those expressed or implied by the forward-looking statements. Such risks and uncertainties include, without limitation; our plans to develop, market and commercialize our product candidates; the initiation, timing, progress and results of our current and future preclinical studies and clinical trials and our research and development programs; our ability to take advantage of expedited regulatory pathways for any of our product candidates; our estimates regarding expenses, future revenue, capital requirements and needs for additional financing; our ability to successfully acquire or license additional product candidates on reasonable terms and advance product candidates into, and successfully complete, clinical studies; our ability to maintain and establish collaborations or obtain additional funding; our ability to obtain and timing of regulatory approval of our current and future product candidates; the anticipated indications for our product candidates, if approved; our expectations regarding the potential market size and the rate and degree of market acceptance of such product candidates; our ability to fund our working capital requirements and expectations regarding the sufficiency of our capital resources; the implementation of our business model and strategic plans for our business and product candidates; our intellectual property position and the duration of our patent rights; developments or disputes concerning our intellectual property or other proprietary rights; our expectations regarding government and third-party payor coverage and reimbursement; our ability to compete in the markets we serve; the impact of government laws and regulations and liabilities thereunder; developments relating to our competitors and our industry; our ability to achieve the anticipated benefits from the agreements entered into in connection with our partnership with Advanz Pharma and; other factors described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, as filed with the Securities and Exchange Commission on March 23, 2023, and our subsequent filings with the SEC. In light of the significant uncertainties in these forward-looking statements, you should not rely upon forward-looking statements as predictions of future events. Although we believe that we have a reasonable basis for each forward-looking statement contained in this presentation, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur at all. Except as otherwise required by law, we disclaim any intention or obligation to update or revise any forward-looking statements, which speak only as of the date they were made, whether as a result of new information, future events or circumstances or otherwise.

Overview

- We believe that govorestat (AT-007) impacts clinically meaningful aspects of the Galactosemia disease phenotype alongside a favorable safety profile, and we plan to seek approval in both US and EU based on current data.
- Govorestat has previously demonstrated a significant reduction in galactitol level (a toxic metabolite formed in Galactosemia patients), which has now translated into consistent improvement on clinical and functional endpoints, including behavior, daily living skills, cognition, fine motor skills, adaptive skills and tremor over 18 months of treatment compared to placebo.
- The primary endpoint and pre-specified sensitivity analysis including cognition showed clinically meaningful trends toward improvement with p-values of 0.1030 and 0.0698, respectively.
- All components of the primary endpoints are positively impacted with govorestat treatment, except for speech; post-hoc analysis of primary endpoint without speech showed statistical significance ($p=0.0205$ at 18 months).
- Key secondary endpoints of adaptive behavior skills and tremor achieved robust and clinically meaningful improvement with p-values of 0.0265 and 0.0428, respectively, over 18 months of treatment compared to placebo.
- Govorestat was safe and well-tolerated with no serious adverse events (SAEs) in the trial and no imbalance in adverse events (AEs) or lab values between the active and placebo groups in the pediatric study.

Next Steps and Market Opportunity

- If approved, govorestat will be the first and only treatment for Galactosemia, a devastating rare neurological disease that progressively worsens over time; dietary restriction prevents death, but does not prevent progression of long-term complications of Galactosemia due to endogenous synthesis of galactose by the body.
- Galactosemia affects approximately 3,000 patients in the US and 4,000 in Europe, with a growth year over year of approximately 200 patients (due to new births); the patient population is well-identified and diagnosed in the US and Europe due to mandatory newborn screening.
- Govorestat treatment for Galactosemia represents a substantial revenue opportunity.
- The European Medicines Agency (EMA) has already provided feedback supportive of potential approval in Europe for govorestat for Galactosemia based on existing data; an MAA submission is planned for Q3 2023
- The Company will request a pre-NDA meeting as soon as possible to discuss an FDA submission based on the current data; if acceptable to the FDA, will target NDA submission in Q3 2023
- The Company also plans in the near-term to request a pre-NDA meeting with the Neurology Division regarding SORD approval based on existing sorbitol reduction data. We believe SORD 12 month clinical outcomes data and DbCM Phase 3 data also provide meaningful catalysts towards the end of the year.

AT-007 ACTION-Galactosemia Kids Pediatric Registrational Clinical Study (47 Children Age 2-17)

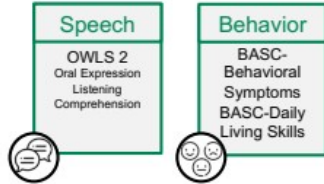
PK/PD Dose Range Finding & Biomarker Data

Long-Term Clinical Outcomes

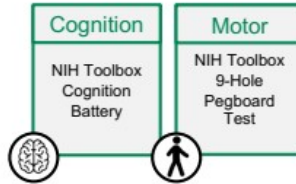


Baseline Clinical Outcomes Weight-based dosing: 15mg/kg>40kg; 20mg/kg 20-40kg; 30mg/kg<20kg

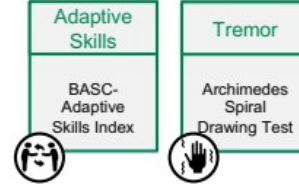
Primary Endpoint:
Global Assessment of Change (Global Statistical Test)
Composite Sum of Change in CNS function



Primary Sensitivity Analysis



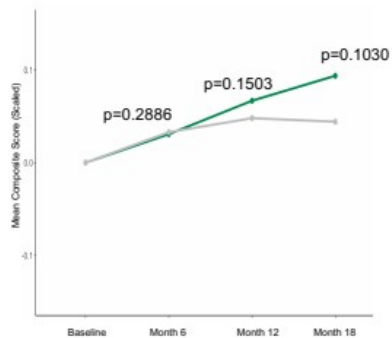
Key Secondary Endpoints



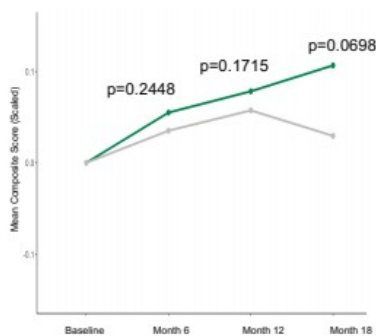
Changes in primary endpoint (movement of cognition and motor skills to sensitivity analyses) was based on recent FDA advice letters

Compelling Improvement in Primary Endpoint over 18 Months Across Multiple Clinical Domains

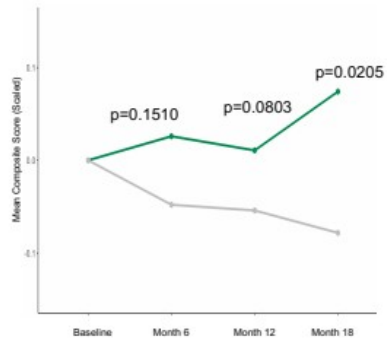
Primary Endpoint: Global Statistical Test (Composite Sum of Change): Activities of Daily Living, Behavior, and Speech



Primary Sensitivity Analysis: Primary Endpoint + Cognition



Post-hoc analysis of primary endpoint without speech (Activities of Daily Living + Behavior)



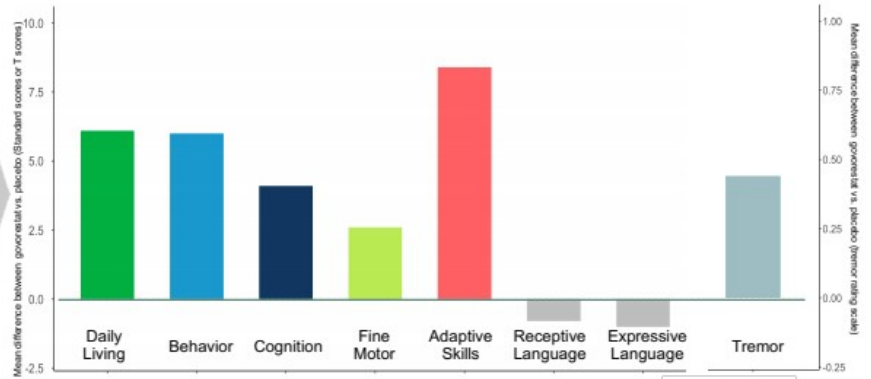
govorestat placebo

Activities of Daily Living (BASC-ADL); Behavior (BASC-Behavioral Index); Speech includes Expressive Language (OWLS-OE) & Receptive Language (OWLS-LC)
Sensitivity analysis including 9-Hole PegBoard Test p = 0.0937 at 18 months

Improvement in Galactitol Biomarker Translates into Consistent Clinical Benefit Across Activities of Daily Living, Behavior, Cognition, Adaptive Skills and Tremor

Weight Group	AT-007 Dose (QD)	% Reduction From Baseline
>40kg	15mg/kg	38.29%
20-40kg	20mg/kg	41.43%
<20kg	30mg/kg	39.83%
All groups	15-30mg/kg	40.19% (p<0.001)

- Significant improvement in galactitol biomarker vs. placebo
- Sustained over time through 18 months of treatment
- No compensatory increase in galactose or Gal-1p

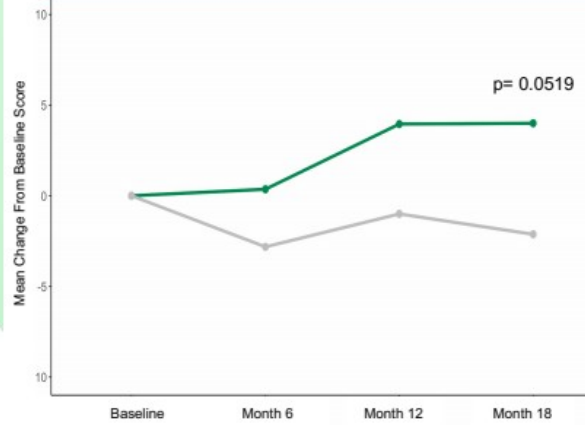


Speech endpoints were not impacted by govestat treatment, which is suspected to be due to lack of progression in the placebo group and concomitant speech therapy received by almost all children in the trial. Of note, patients with severe speech deficits showed a favorable trend towards improvement with AT-007 vs. placebo. Tremor is measured on a different scale vs. other tests, and is referenced by the right hand y axis

Consistent Improvement on Activities of Daily Living with Govorestat vs. Placebo

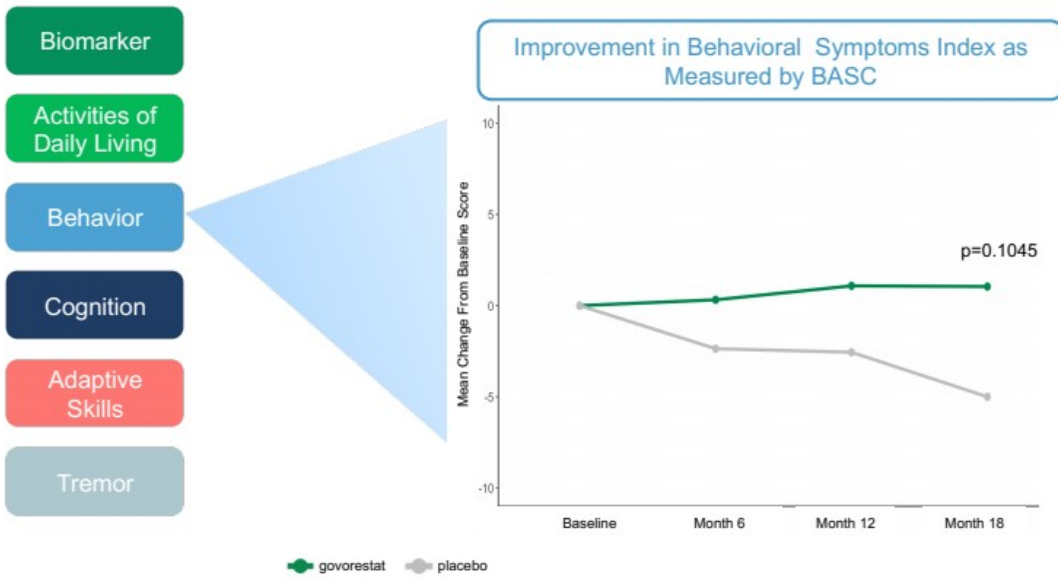
- Biomarker
- Activities of Daily Living
- Behavior
- Cognition
- Adaptive Skills
- Tremor

Improvement in Activities of Daily Living (ADL) as Measured by Behavioral Assessment Scales for Children (BASC)



govorestat placebo

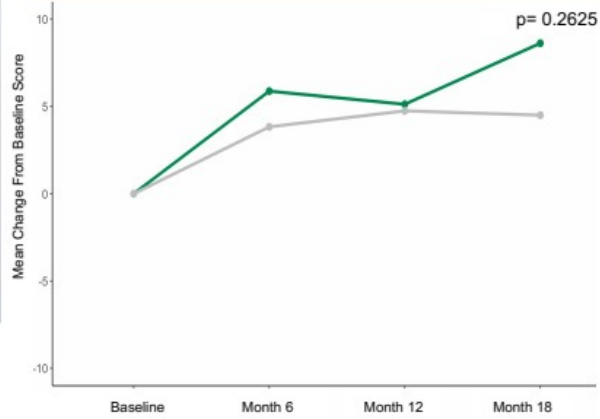
Consistent Improvement in Behavioral with Govorestat vs. Placebo



Consistent Improvement in Cognition with Govorestat vs. Placebo

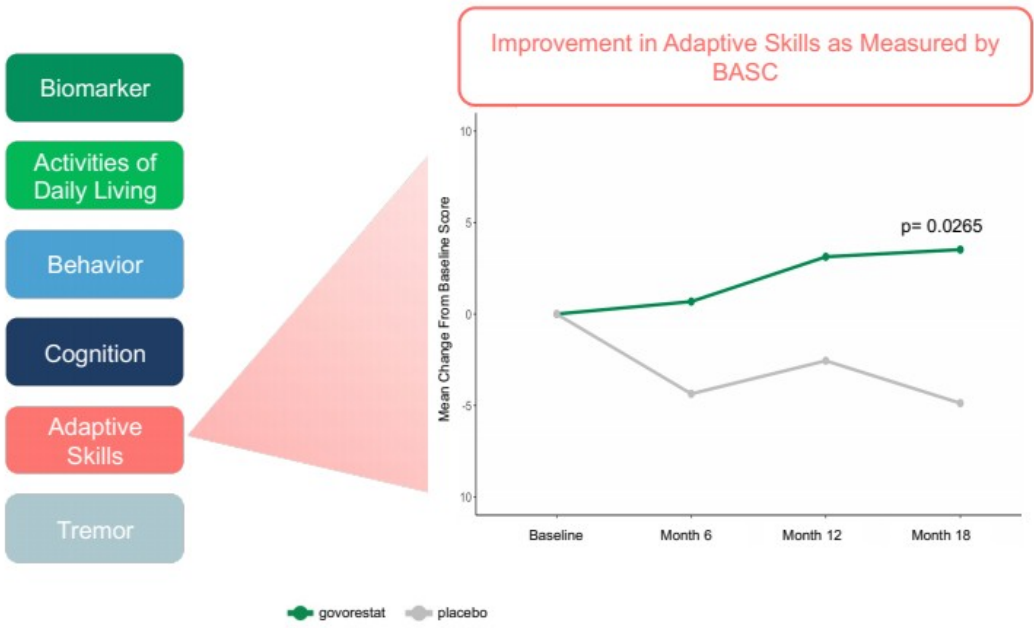
- Biomarker
- Activities of Daily Living
- Behavior
- Cognition
- Adaptive Skills
- Tremor

Improvement in Cognition as Measured by NIH Toolbox Cognition Battery



govorestat placebo

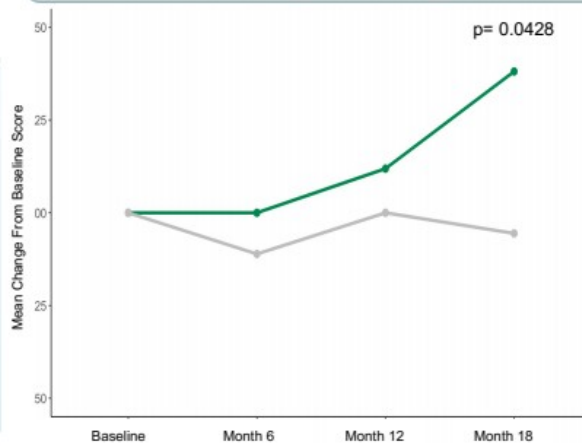
Consistent Improvement in Adaptive Skills with Govorestat vs. Placebo



Consistent Improvement in Tremor with Govorestat vs. Placebo

- Biomarker
- Activities of Daily Living
- Behavior
- Cognition
- Adaptive Skills
- Tremor

Improvement in Tremor as Measured by Archimedes Spiral Drawing Test



govorestat placebo

Note: Spiral drawing is scored on a much smaller scale of 0-4; as compared to other tests (BASC is scaled on a T score of 0-50 and NIH Cognition is scaled on a standard score of 0-100)

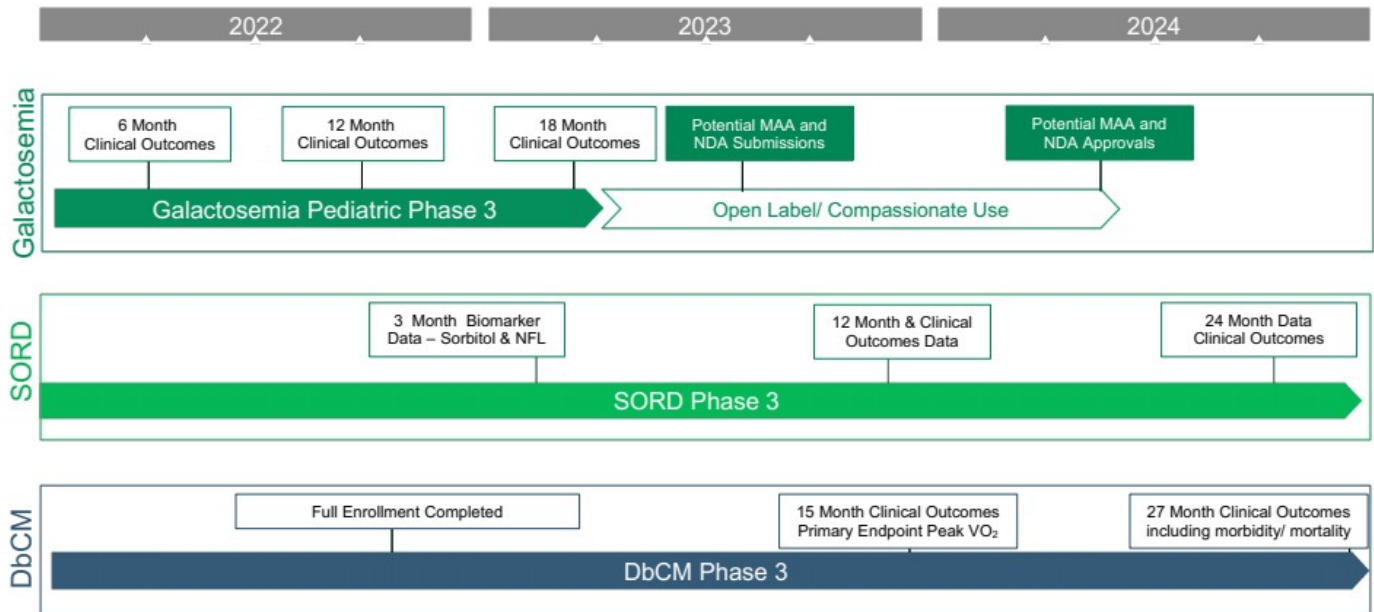
Safety Summary

- AT-007 was safe and well-tolerated with no serious adverse events
- All AEs were mild to moderate
- AEs & lab values between AT-007 and placebo groups were balanced

	Placebo (N=16) Number (%) of Subjects	Govorestat (N=31) Number (%) of Subjects
Subjects Reporting at Least One TEAE	16 (100%)	30 (96.8%)
Gastrointestinal disorders	11 (68.8%)	23 (74.2%)
Hepatic enzyme increased	2 (12.5%)	8 (25.8%)
Urine albumin/creatinine ratio increased	7 (43.8%)	5 (16.1%)
Urine protein/creatinine ratio increased	3 (18.8%)	2 (6.5%)
Renal & Urinary Disorders	1 (6.3%)	3 (9.7%)
Infections and infestations	10 (62.5%)	18 (58.1%)

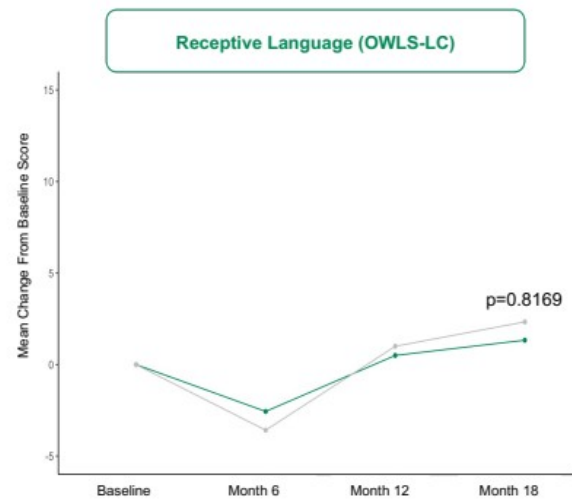
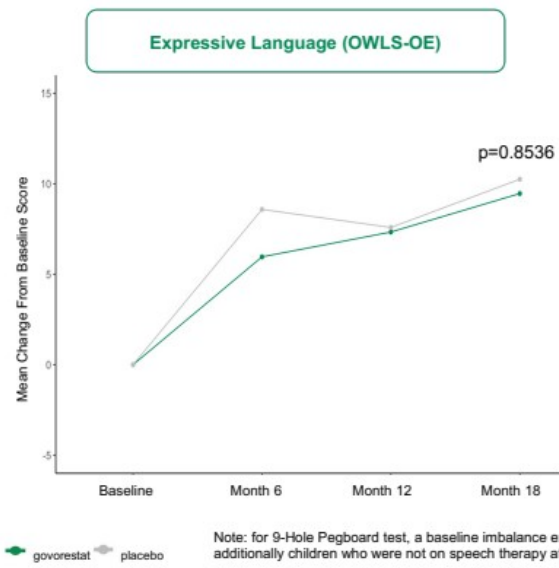
Refers to patients having reported at least 1 term in AE category; AE, adverse event

Key Projected Milestones by Program



Appendix

Speech Endpoints Were Not Impacted by Govorestat Treatment, Likely Due to Speech Therapy Across Both Active and Placebo Groups



Note: for 9-Hole Pegboard test, a baseline imbalance existed between the govorestat and placebo group with more patients on speech therapy in the placebo arm at baseline; additionally children who were not on speech therapy at baseline started speech therapy over the course of the trial in both active and placebo groups



Applied Therapeutics, Inc. Announces \$30 Million Private Placement of Equity

NEW YORK, April 24, 2023 (GLOBE NEWSWIRE) — Applied Therapeutics, Inc. (NASDAQ: APLT) (the “Company”), a clinical-stage biopharmaceutical company developing a pipeline of novel drug candidates against validated molecular targets in indications of high unmet medical need, today announced it has entered into a definitive securities purchase agreement, dated as of April 23, 2023, for the sale of 9,735,731 shares of the Company’s common stock, par value \$0.0001 per share at a purchase price of \$0.946 per share (the “Shares”) and 22,000,000 pre-funded warrants to purchase common stock at a purchase price of \$0.945, which equal the purchase price per share of common stock less the \$0.001 per share exercise price of each pre-funded warrant (the “Pre-Funded Warrants” and together with the Shares the “Securities”), in a private placement (the “Private Placement”). The Private Placement was led by new investor Venrock Healthcare Capital Partners and is expected to result in gross proceeds to the Company of approximately \$30 million, before deducting placement agent commissions and other offering expenses.

The Private Placement is expected to close on or about April 26, 2023, subject to the satisfaction of customary closing conditions. Additional details regarding the Private Placement will be included in a Form 8-K to be filed by the Company with the Securities and Exchange Commission (“SEC”).

The Company intends to use the net proceeds to fund research and development and registration of its pipeline candidates, and for working capital and general corporate purposes. The capital raised in the Private Placement, in addition to current cash and potential milestones expected from the Advanz European licensing partnership, are expected to fund the business through the middle of 2024.

SVB Securities and UBS Investment Bank acted as placement agents in the transaction (the “Placement Agents”). Skadden, Arps, Slate, Meagher & Flom LLP acted as legal counsel for the Company.

The Securities being sold in the Private Placement have not been registered under the Securities Act of 1933, as amended, or state securities laws and may not be offered or sold in the United States absent registration with the SEC or an applicable exemption from such registration requirements. The Company has agreed to file a registration statement with the SEC covering the resale of the Shares and the shares underlying the Pre-Funded Warrants issuable in connection with the Private Placement.

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

About Applied Therapeutics

Applied Therapeutics is a clinical-stage biopharmaceutical company developing a pipeline of novel drug candidates against validated molecular targets in indications of high unmet medical need. The Company’s lead drug candidate, AT-007 (govorestat), is a novel central nervous system penetrant Aldose Reductase Inhibitor (ARI) for the treatment of CNS rare metabolic diseases, including Galactosemia, SORD Deficiency, and PMM2-CDG. The Company is also developing AT-001, a novel potent ARI, for the treatment of Diabetic Cardiomyopathy, or DbCM, a fatal fibrosis of the heart. The preclinical pipeline also includes AT-003, an ARI designed to cross through the back of the eye when dosed orally, for the treatment of Diabetic Retinopathy.

To learn more, please visit www.appliedtherapeutics.com and follow the company on Twitter @Applied_Tx.

Forward-Looking Statements

Certain statements in this press release including, without limitation, with respect to the completion of the offering and the intended use of proceeds, are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and the Federal securities laws. Statements, that are not statements of historical fact, regarding the strategy, future operations, prospects, plans and objectives of management, including words such as “may,” “will,” “expect,” “anticipate,” “plan,” “intend,” and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) are forward-looking statements. The Company cautions readers that these statements are subject to a number of known and unknown risks, uncertainties and other factors, many of which are beyond the Company’s ability to control or predict, and any forward-looking statements in this release are not a guarantee of future performance and actual results to differ materially from those expressed or implied by the forward-looking statements.

Such risks and uncertainties include, without limitation, (i) our plans to develop, market and commercialize our product candidates, (ii) the initiation, timing, progress and results of our current and future preclinical studies and clinical trials and our research and development programs, (iii) our ability to take advantage of expedited regulatory pathways for any of our product candidates, (iv) our estimates regarding expenses, future revenue, capital requirements and needs for additional financing, (v) our ability to successfully acquire or license additional product candidates on reasonable terms and advance product candidates into, and successfully complete, clinical studies, (vi) our ability to maintain and establish collaborations or obtain additional funding, (vii) our ability to obtain and timing of regulatory approval of our current and future product candidates, (viii) the anticipated indications for our product candidates, if approved, (ix) our expectations regarding the potential market size and the rate and degree of market acceptance of such product candidates, (x) our ability to fund our working capital requirements and expectations regarding the sufficiency of our capital resources, (xi) the implementation of our business model and strategic plans for our business and product candidates, (xii) our intellectual property position and the duration of our patent rights, (xiii) developments or disputes concerning our intellectual property or other proprietary rights, (xiv) our expectations regarding government and third-party payor coverage and reimbursement, (xv) our ability to compete in the markets we serve, (xvi) the impact of government laws and regulations and liabilities thereunder, (xvii) developments relating to our competitors and our industry, (xviii) our ability to achieve the anticipated benefits from the agreements entered into in connection with our partnership with Advanz Pharma and (xix) other factors that may impact our financial results. In light of the significant uncertainties in these forward-looking statements, you should not rely upon forward-looking statements as predictions of future events. Although we believe that we have a reasonable basis for each forward-looking statement contained in this press release, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur at all. Factors that may cause actual results to differ from those expressed or implied in the forward-looking statements in this press release are discussed in our filings with the U.S. Securities and Exchange Commission, including the “Risk Factors” contained therein. Except as otherwise required by law, we disclaim any intention or obligation to update or revise any forward-looking statements, which speak only as of the date they were made, whether as a result of new information, future events or circumstances or otherwise.

Contacts

Investors:

Maeve Conneighton

(212) 600-1902 or

appliedtherapeutics@argotpartners.com

Media:

media@appliedtherapeutics.com

Applied Therapeutics, Inc.
