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): June 27, 2022(June 22, 2022)

APPLIED THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

 $\begin{array}{c} \textbf{81-3405262} \\ \text{(I.R.S. Employer Identification} \end{array}$

001-38898

(Commission File Number)

Delaware

(State or Other Jurisdiction of

Incorporation)		No.)			
545 Fifth Avenue, Suite 1400 New York, NY 10017 (Address of Principal Executive Offices)		10017 (Zip Code)			
Registrant's te	elephone number, including area code: (212) 220	0-9226			
heck the appropriate box below if the Form 8-K filing sollowing provisions:	g is intended to simultaneously satisfy the fili	ing obligation of the registrant under any of the			
☐ Written communications pursuant to Rule 425 under	the Securities Act (17 CFR 230.425)				
Soliciting material pursuant to Rule 14a-12 under the	e Exchange Act (17 CFR 240.14a-12)				
☐ Pre-commencement communications pursuant to Ru	le 14d-2(b) under the Exchange Act (17 CFR 24	10.14d-2(b))			
☐ Pre-commencement communications pursuant to Ru	le 13e-4(c) under the Exchange Act (17 CFR 24	0.13e-4(c))			
dicate by check mark whether the registrant is an emenapter) or Rule 12b-2 of the Securities Exchange Act of		of the Securities Act of 1933 (§230.405 of this			
merging growth company					
an emerging growth company, indicate by check mark revised financial accounting standards provided pursual		ded transition period for complying with any new			
ecurities registered pursuant to Section 12(b) of the Act:					
Title of each class Common stock	Trading Symbol(s) APLT	Name of each exchange on which registered The Nasdaq Stock Market LLC			
Common stock	ALL	The Masdaq Stock Market EEC			

Item 1.01. Entry Into a Material Definitive Agreement.

On June 22, 2022, Applied Therapeutics, Inc. (the "Company") entered into an underwriting agreement (the "Underwriting Agreement") with SVB Securities LLC (the "Underwriter"), relating to the issuance and sale pursuant to an underwritten public offering (the "Offering") of 20,000,000 shares (the "Shares") of its common stock, par value \$0.0001 per share (the "Common Stock"), 10,000,000 pre-funded warrants to purchase Common Stock in lieu of Shares (the "Pre-Funded Warrants") at an exercise price of \$0.0001 per share, and accompanying warrants to purchase up to 30,000,000 shares of its Common Stock (the "Common Warrants" and together with the Pre-Funded Warrants, the "Warrants") at an exercise price of \$1.00 per share (the Shares and Warrants together, the "Securities"). Each share of Common Stock and accompanying Common Warrant was sold at a public offering price of \$1.00, less underwriting discounts and commissions, and each Pre-Funded Warrant and accompanying Common Warrant was sold at a public offering price of \$0.9999, less underwriting discounts and commissions, as described in the prospectus supplement, dated June 22, 2022, filed with the Securities and Exchange Commission on June 24, 2022. The Pre-Funded Warrants and the Common Warrants are immediately exercisable and will expire five years from the date of issuance. Holders may not exercise any Pre-Funded Warrants or Common 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. Holders of the Warrants (together with affiliates) who immediately prior to the issue date beneficially own more than 9.99% of outstanding Common Stock may not exercise any portion of their Pre-Funded Warrants or Common Warrants if the holder (together with affiliates) would beneficially own more than 19.99% of the Company's outstanding Common Stock after exercise. The 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 Warrants will be entitled to receive, upon exercise of the Warrants, the kind and amount of securities, cash or other property that the holders would have received had they exercised the Warrants immediately prior to such transaction. The 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 Company intends to use the net proceeds from this Offering for general corporate purposes. General corporate purposes may include research and development costs, including the conduct of clinical trials and process development and manufacturing of the Company's product candidates, expansion of the Company's research and development capabilities, working capital and capital expenditures. Entities affiliated with Alexandria Venture Investments, LLC, which, as of March 31, 2022, owned 13.1% of the Company's outstanding Common Stock, purchased 3,500,000 shares and 1,500,000 Pre-Funded Warrants in the Offering.

The Offering closed on June 27, 2022.

The foregoing summary of the Underwriting Agreement, Pre-Funded Warrants and Common Warrants does not purport to be complete and is subject to, and qualified in its entirety by, the Underwriting Agreement, which is filed herewith as Exhibit 1.1 and incorporated herein by reference, the form of Pre-Funded Warrant, which is filed herewith as Exhibit 4.1 and incorporated herein by reference, and the form of Common Warrant, which is filed herewith as Exhibit 4.2 and incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits:

Exhibit

The following exhibit is attached with this current report on Form 8-K:

No.	Description
1.1	Underwriting Agreement, dated June 22, 2022, between the Company and SVB Securities LLC.
<u>4.1</u>	Form of Pre-Funded Warrant to Purchase Common Stock.
<u>4.2</u>	Form of Common Warrant to Purchase Common Stock.
<u>5.1</u>	Opinion of Skadden, Arps, Slate, Meagher & Flom LLP regarding the legality of the Securities in the Offering.
<u>23.1</u>	Consent of Skadden, Arps, Slate, Meagher & Flom LLP (included in Exhibit 5.1).
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: June 27, 2022 By: /s/ Shoshana Shendelman

Name: Shoshana Shendelman

Title: President and Chief Executive Officer

EXECUTION VERSION

Applied Therapeutics, Inc.

20,000,000 Shares of Common Stock (\$0.0001 par value) and
Pre-Funded Warrants to purchase 10,000,000 Shares of Common Stock and
Warrants to purchase 30,000,000 Shares of Common Stock

Underwriting Agreement

New York, New York June 22, 2022

SVB Securities LLC

As Representative of the several Underwriters,

c/o SVB Securities LLC 1301 Avenue of the Americas, 12th Floor New York, NY 10019

Ladies and Gentlemen:

Applied Therapeutics, Inc., a corporation organized under the laws of the State of Delaware (the "Company."), proposes to sell to the several underwriters named in Schedule I hereto (the "Underwriters"), for whom you (the "Representative") are acting as the representative, (i) 20,000,000 shares of common stock, \$0.0001 par value per share ("Common Stock") of the Company (the "Shares"), (ii) warrants of the Company, in the form set forth in Exhibit B hereto, to purchase up to 30,000,000 shares of Common Stock (the "Share Warrants") and (iii) pre-funded warrants of the Company, in the form set forth in Exhibit B hereto, to purchase up to 10,000,000 shares of Common Stock (the "Pre-Funded Warrants" and together with the Share Warrants, the "Warrants"). Each Share is being sold together with one Share Warrant and each Pre-Funded Warrant is being sold together with one Share Warrant. Each full Share Warrant is exercisable for one share of Common Stock at an exercise price of \$1.0000 per whole share of Common Stock and each full Pre-Funded Warrant is exercisable for one share of Common Stock at an exercise price of \$0.0001 per whole share of Common Stock. The Shares and the Warrants are herein referred to as the "Securities". The shares of Common Stock issuable upon exercise of the Warrants are herein referred to as the "Warrant Shares". To the extent there are no additional Underwriters listed on Schedule I hereto other than you, the term Representative as used herein shall mean you, as Underwriter, and the terms Representative and Underwriters shall mean either the singular or plural as the context requires.

As used in this underwriting agreement (this "Agreement"), the "Registration Statement" means the registration statement referred to in paragraph 1(a) hereof, including the exhibits, schedules and financial statements and any prospectus supplement relating to the Securities that is filed with the Securities and Exchange Commission (the "SEC") pursuant to Rule 424(b) under the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder (the "Securities Act") and deemed part of such registration statement pursuant to Rule 430B under the Securities Act, as amended on each Effective Date, and, in the event any post-effective amendment thereto or any registration statement and any amendments thereto filed pursuant to Rule 462(b) under the Securities Act (a "Rule 462(b) Registration Statement") becomes effective prior to the Closing Date (as defined in Section 3 hereof), shall also mean such registration statement as so amended or such Rule 462(b) Registration Statement, as the case may be; the "Effective Date" means each date and time that the Registration Statement, any post-effective amendment or amendments thereto or any Rule 462(b) Registration Statement became or becomes effective; the "Base Prospectus" means the base prospectus referred to in paragraph 1(a) hereof contained in the Registration Statement at the date and time that this Agreement is executed and delivered by the parties hereto (the "Execution Time"); the "Preliminary Prospectus" means any preliminary prospectus supplement to the Base Prospectus referred to in paragraph 1(a) hereof which is used prior to the filing of the Prospectus, together with the Base Prospectus; and the "Prospectus" means the prospectus supplement relating to the Securities that is first filed pursuant to Rule 424(b) under the Securities Act ("Rule 424(b)") after the Execution Time, together with the Base Prospectus.

Any reference herein to the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the documents incorporated by reference therein pursuant to Item 12 of Form S-3 which were filed under the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder (the "Exchange Act") on or before the Effective Date of the Registration Statement or the issue date of the Base Prospectus, any Preliminary Prospectus or the Prospectus, as the case may be; and any reference herein to the terms "amend," "amendment" or "supplement" with respect to the Registration Statement, the Base Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the filing of any document under the Exchange Act after the Effective Date of the Registration Statement or the issue date of the Base Prospectus, any Preliminary Prospectus or the Prospectus, as the case may be, deemed to be incorporated therein by reference.

As used in this Agreement, the "<u>Disclosure Package</u>" shall mean (i) the Preliminary Prospectus that is generally distributed to investors and used to offer the Securities, (ii) any issuer free writing prospectus, as defined in Rule 433 under the Securities Act (an "<u>Issuer Free Writing Prospectus</u>"), identified in Schedule II hereto, (iii) any other free writing prospectus, as defined in Rule 405 under the Securities Act (a "<u>Free Writing Prospectus</u>"), that the parties hereto shall hereafter expressly agree in writing to treat as part of the Disclosure Package and (iv) the pricing information set forth on Schedule III hereto.

- 1. <u>Representations and Warranties</u>. The Company represents and warrants to, and agrees with, each Underwriter as set forth below in this Section 1.
 - (a) The Company meets the requirements for use of Form S-3 under the Securities Act and has prepared and filed with the SEC a shelf registration statement (file number 333-238948) on Form S-3, including a related Base Prospectus, for the registration of the offering and sale of the Shares, the Warrants and the Warrant Shares under the Securities Act. Such Registration Statement, including any amendments thereto filed prior to the Execution Time, has become effective. The Company may have filed with the SEC, as part of an amendment to the Registration Statement or pursuant to Rule 424(b), preliminary prospectus supplements relating to the Securities, each of which has previously been furnished to you. The Company will file with the SEC a final prospectus supplement relating to the Securities in accordance with Rule 424(b) after the Execution Time. As filed, such final prospectus supplement shall contain all information required by the Securities Act and the rules thereunder and, except to the extent the Representative shall agree in writing to a modification, shall be in all substantive respects in the form furnished to you prior to the Execution Time or, to the extent not completed at the Execution Time, shall contain only such specific additional information and other changes (beyond that contained in the Base Prospectus and any Preliminary Prospectus) as the Company has advised you, prior to the Execution Time, will be included or made therein. The Registration Statement, at the Execution Time, meets the requirements set forth in Rule 415(a)(1)(x) under the Securities Act. The initial Effective Date of the Registration Statement was not earlier than the date three years before the Execution Time.
 - (b) On each Effective Date, the Registration Statement did, and when the Prospectus is first filed in accordance with Rule 424(b) and on the Closing Date (as defined herein), the Prospectus (and any supplement thereto) will, comply in all material respects with the applicable requirements of the Securities Act and the rules thereunder and the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder (the "Exchange Act"); on each Effective Date, at the Execution Time and on the Closing Date, the Registration Statement did not and will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements therein not misleading; and on the date of any filing pursuant to Rule 424(b) and on the Closing Date, the Prospectus (together with any supplement thereto) will not include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; *provided, however*, that the Company makes no representations or warranties as to the information contained in or omitted from the Registration Statement or the Prospectus (or any supplement thereto) in reliance upon and in conformity with information furnished in writing to the Company by or on behalf of any Underwriter through the Representative specifically for inclusion in the Registration Statement or the Prospectus (or any supplement thereto), it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 8 hereof.

- (c) (i) The Disclosure Package and (ii) each electronic road show, when taken together as a whole with the Disclosure Package, does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The preceding sentence does not apply to statements in or omissions from the Disclosure Package based upon and in conformity with written information furnished to the Company by any Underwriter through the Representative specifically for use therein, it being understood and agreed that the only such information furnished by or on behalf of any Underwriter consists of the information described as such in Section 8 hereof.
- (d) (i) At the time of filing the Registration Statement and (ii) as of the Execution Time (with such date being used as the determination date for purposes of this clause (ii)), the Company was not and is not an Ineligible Issuer (as defined in Rule 405 under the Securities Act ("Rule 405")), without taking account of any determination by the SEC pursuant to Rule 405 that it is not necessary that the Company be considered an Ineligible Issuer.
- (e) From the time of the initial filing of the Registration Statement with the SEC through the Execution Time, the Company has been and is an "emerging growth company," as defined in Section 2(a) of the Securities Act (an "Emerging Growth Company").
- (f) The Company (i) has not engaged in any Testing-the-Waters Communication and (ii) has not authorized anyone to engage in Testing-the-Waters Communications. The Company has not distributed any Written Testing-the-Waters Communications. "Testing-the-Waters Communication" means any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the Securities Act. "Written Testing-the-Waters Communication" means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405.
- (g) Each Issuer Free Writing Prospectus does not include any information that conflicts with the information contained in the Registration Statement. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus based upon and in conformity with written information furnished to the Company by any Underwriter through the Representative specifically for use therein, it being understood and agreed that the only such information furnished by or on behalf of any Underwriter consists of the information described as such in Section 8 hereof.

- (h) The interactive data in the eXtensible Business Reporting Language ("XBRL") included as an exhibit to the Registration Statement fairly presents the information called for in all material respects and has been prepared in accordance with the SEC's rules and guidelines applicable thereto.
- (i) Each of the Company and its subsidiaries (i) has been duly incorporated and is validly existing as a corporation in good standing under the laws of the jurisdiction in which it is chartered or organized with full corporate power and authority to own or lease, as the case may be, and to operate its properties and conduct its business as described in the Registration Statement, the Disclosure Package and the Prospectus, and is duly qualified to do business as a foreign corporation and (ii) is in good standing under the laws of each jurisdiction which requires such qualification, except where the failure to be so qualified or in good standing would not reasonably be expected, individually or in the aggregate, to have a material adverse effect on the condition (financial or otherwise), prospects, earnings, business or properties of the Company and its subsidiaries, taken as a whole, whether or not arising from transactions in the ordinary course of business (a "Material Adverse Effect").
- (j) All the outstanding shares of capital stock of each subsidiary of the Company have been duly and validly authorized and issued and are fully paid and non-assessable, and, except as otherwise set forth in the Registration Statement, the Disclosure Package and the Prospectus, all outstanding shares of capital stock of the subsidiaries are owned by the Company either directly or through wholly owned subsidiaries free and clear of any perfected security interest or any other security interests, claims, liens or encumbrances.
- (k) There is no franchise, contract or other document of a character required to be described in the Registration Statement, the Disclosure Package or the Prospectus, or to be filed as an exhibit thereto, which is not described or filed as required (and the Preliminary Prospectus contains in all material respects the same description of the foregoing matters contained in the Prospectus); and the statements included or incorporated by reference in the Registration Statement, the Disclosure Package, the Prospectus and the Company's most recent Annual Report on Form 10-K and Quarterly Report on Form 10-Q, as applicable, under the headings "U.S. Federal Income Tax Considerations for Non-U.S. Holders," "Risk Factors—Risks Related to Regulatory Compliance," "Risk Factors—Risks Related to Our Intellectual Property" and "Business—Government Regulation and Product Approval" 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.

- (1) This Agreement has been duly authorized, executed and delivered by the Company. The Shares to be purchased by the Underwriters from the Company have been duly authorized for issuance and sale to the Underwriters pursuant to this Agreement and, when issued and delivered by the Company pursuant to this Agreement against payment of the consideration set forth herein, will be validly issued and fully paid and non-assessable; and the issuance of the Securities is not subject to the preemptive or other similar rights of any securityholder of the Company. The Common Stock conforms in all material respects to all statements relating thereto contained in the Registration Statement, the Disclosure Package and the Prospectus and such description conforms in all material respects to the rights set forth in the instruments defining the same. The Warrants have been duly authorized by the Company and, when executed and delivered by the Company, will be valid and binding agreements of the Company, enforceable against the Company in accordance with their terms, except as the enforcement thereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting the rights and remedies of creditors or by general equitable principles. The Warrant Shares have been duly authorized and validly reserved for issuance upon exercise of the Warrants in a number sufficient to meet the current exercise requirements. The Warrant Shares, when issued and delivered upon exercise of the Warrants in accordance therewith (and provided that a sufficient number of authorized but unissued shares of Common Stock are available), will be validly issued, fully paid and nonassessable and will conform in all material respects to the descriptions thereof in the Registration Statement, the Disclosure Package and the Prospectus. The issuance of the Warrant Shares is not subject to any preemptive rights or other similar rights of any security holder of the Company.
- (m) The Company is not and, after giving effect to the offering and sale of the Securities and the application of the proceeds thereof as described in the Registration Statement, the Disclosure Package and the Prospectus will not be, an "investment company" as defined in the Investment Company Act of 1940, as amended.
- (n) No consent, approval, authorization, filing with or order of any court or governmental agency or body is required in connection with the transactions contemplated herein and by the Warrants, except such as have been obtained under the Securities Act, the listing rules of the Nasdaq Global Market and applicable rules of the Financial Industry Regulatory Authority, Inc., and such as may be required under the blue sky laws of any jurisdiction in connection with the purchase and distribution of the Securities by the Underwriters in the manner contemplated herein and in the Registration Statement, the Disclosure Package and the Prospectus.
- (o) Neither the issue and sale of the Securities nor the consummation of any other of the transactions herein contemplated or contemplated by the Warrants nor the fulfillment of the terms hereof or of the Warrants will conflict with, result in a breach or violation of, or imposition of any lien, charge or encumbrance upon any property or assets of the Company or any of its subsidiaries pursuant to, (i) the charter or bylaws of the Company or any of its subsidiaries, (ii) the terms of any indenture, contract, lease, mortgage, deed of trust, note agreement, loan agreement or other agreement, obligation, condition, covenant or instrument to which the Company or any of its subsidiaries is a party or bound or to which its or their property is subject, or (iii) any statute, law, rule, regulation, judgment, order or decree applicable to the Company or any of its subsidiaries of any court, regulatory body, administrative agency, governmental body, arbitrator or other authority having jurisdiction over the Company or any of its subsidiaries or any of its or their properties, except in the case of clauses (ii) and (iii) for any such breach, violation or imposition as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect.

- (p) No holders of securities of the Company have rights to the registration of such securities under the Registration Statement, except for such rights as have been effectively waived.
- (q) The consolidated historical financial statements and schedules of the Company and its consolidated subsidiaries included or incorporated by reference in the Registration Statement, the Disclosure Package and the Prospectus present fairly, in all material respects, the financial condition, results of operations and cash flows of the Company as of the dates and for the periods indicated, comply as to form in all material respects with the applicable accounting requirements of the Securities Act and have been prepared in conformity with generally accepted accounting principles in the United States applied on a consistent basis throughout the periods involved (except as otherwise noted therein). The selected financial data included or incorporated by reference in the Registration Statement, the Disclosure Package and the Prospectus fairly present, in all material respects, the information included therein on the basis stated in or incorporated by reference in the Registration Statement, the Disclosure Package and the Prospectus.
- (r) 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 or its or their property is pending or, to the best knowledge of the Company, threatened that (i) could reasonably be expected to have a material adverse effect on the performance of this Agreement or the consummation of any of the transactions contemplated hereby or (ii) could reasonably be expected to have a Material Adverse Effect, except as set forth in or contemplated in the Registration Statement, Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).
- (s) 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) Neither the Company nor any subsidiary is in violation or default of (i) any provision of its charter or bylaws, (ii) the terms of any indenture, contract, lease, mortgage, deed of trust, note agreement, loan agreement or other agreement, obligation, condition, covenant or instrument to which it is a party or bound or to which its property is subject, or (iii) any statute, law, rule, regulation, judgment, order or decree of any court, regulatory body, administrative agency, governmental body, arbitrator or other authority having jurisdiction over the Company or such subsidiary or any of its properties, as applicable, except in the case of clauses (ii) and (iii) for any such violation or default as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect.
- (u) Ernst & Young LLP, who has certified certain financial statements of the Company and delivered its report with respect to the audited financial statements and schedules included in the Registration Statement, the Disclosure Package and the Prospectus, is an independent registered public accounting firm with respect to the Company within the meaning of the Securities Act and the applicable published rules and regulations thereunder.
- (v) 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 Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto)) 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 Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).
- (w) 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 Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).
- (x) 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 Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

- (y) No subsidiary of the Company is currently prohibited, directly or indirectly, from paying any dividends to the Company, from making any other distribution on such subsidiary's capital stock, from repaying to the Company any loans or advances to such subsidiary from the Company or from transferring any of such subsidiary's property or assets to the Company or any other subsidiary of the Company, except as described in or contemplated by the Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).
- (z) 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 Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).
- (aa) 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; (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; and (v) the interactive data in XBRL included or incorporated by reference in the Registration Statement, the Preliminary Prospectus and the Prospectus is in compliance with the SEC's published rules, regulations and guidelines applicable thereto. 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.

- (bb) The Company and its subsidiaries maintain "disclosure controls and procedures" (as such term is defined in Rule 13a-15(e) under the Exchange Act); and such disclosure controls and procedures are effective.
- (cc) The Company has not taken, directly or indirectly (without giving effect to the activities of the Underwriters), any action designed to or that would constitute or that might reasonably be expected to cause or result in, under the Exchange Act or otherwise, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.
- (dd) 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 or relating to 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 Registration Statement, Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto). Except as set forth in the Registration Statement, the Disclosure Package and the Prospectus, 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.
- (ee) 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 Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

- 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.
- (gg) There is and has been no failure on the part of the Company and any of the Company's directors or officers, in their capacities as such, to comply with any provision of the Sarbanes-Oxley Act of 2002, as amended, and the rules and regulations promulgated in connection therewith (the "Sarbanes-Oxley Act"), including Section 402 relating to loans and Sections 302 and 906 relating to certifications.
- (hh) 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.
- (jj) 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).
- (kk) 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.

- (II) The subsidiaries listed on Annex A attached hereto are the only significant subsidiaries of the Company as defined by Rule 1-02 of Regulation S-X.
- (mm) Except as disclosed in the Registration Statement, Disclosure Package and the Prospectus, 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 Registration Statement, the Disclosure Package and Prospectus 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.

- (nn) (i) Except as may be included in the Registration Statement, the Disclosure Package and the Prospectus, (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 Registration Statement, the Disclosure Package and the Prospectus under the captions "Risk Factors—Risks Related to Our Intellectual Property" and "Business—Intellectual Property," 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.
- (oo) (i) Except as described in the Registration Statement, the Disclosure Package and the Prospectus, 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 Registration Statement, the Disclosure Package and the Prospectus, or the results of which are referred to in the Registration Statement, the Disclosure Package and the Prospectus, as applicable, 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 Registration Statement, the Disclosure Package and the Prospectus of the results of such studies are accurate and complete descriptions in all material respects and fairly present the data derived there-from; (iii) the Company has no knowledge of any other studies not described in the Registration Statement, the Disclosure Package and the Prospectus, the results of which are inconsistent with or call into question the results described or referred to in the Registration Statement, the Disclosure Package and the Prospectus; (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 Registration Statement, the Disclosure Package and the Prospectus or the results of which are referred to in the Registration Statement, the Disclosure Package and the Prospectus, 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.

- (pp) 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 Registration Statement, the Disclosure Package and the Prospectus, 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.
- (qq) Neither the Company nor any of its subsidiaries nor any of its or their properties or assets has any immunity from the jurisdiction of any court or from any legal process (whether through service or notice, attachment prior to judgment, attachment in aid of execution or otherwise) under the laws of the State of New York.
- (rr) Except as disclosed in the Registration Statement, the Disclosure Package and the Prospectus, the Company (i) does not have any material lending or other similar relationship with any banking or lending affiliate of any of the Underwriters and (ii) does not intend to use any of the proceeds from the sale of the Securities hereunder to repay any outstanding debt owed to any affiliate of any of the Underwriters.

Any certificate signed by any officer of the Company and delivered to the Representative or counsel for the Underwriters in connection with the offering of the Securities shall be deemed a representation and warranty by the Company, as to matters covered thereby, to each Underwriter.

2. <u>Purchase and Sale</u>. Subject to the terms and conditions and in reliance upon the representations and warranties herein set forth, the Company agrees to sell to each Underwriter, and each Underwriter agrees, severally and not jointly, to purchase from the Company the amount of the Shares, Share Warrants and Pre-Funded Warrants set forth opposite such Underwriter's name in Schedule I hereto. The purchase price per share of Common Stock and the accompanying one Share Warrant to be paid by the several Underwriters to the Company shall be \$0.93 (the "Share Purchase Price"). The purchase price per Pre-Funded Warrant and the accompanying one Share Warrant shall be \$0.9299.

3. Delivery and Payment. Delivery of and payment for the Shares and the Warrants shall be made at 9:00 a.m., New York City time, on June 27, 2022, or at such time on such later date not more than three Business Days after the foregoing date as the Representative shall designate, which date and time may be postponed by agreement between the Representative and the Company or as provided in Section 9 hereof (such date and time of delivery and payment for the Securities being herein called the "Closing Date"). As used herein, "Business Day" shall mean any day other than a Saturday, a Sunday or a legal holiday or a day on which banking institutions or trust companies are authorized or obligated by law to close in New York City. Delivery of the Shares shall be made to the Representative for the respective accounts of the several Underwriters against payment by the several Underwriters through the Representative of the purchase price of the Securities to or upon the order of the Company by wire transfer payable in same-day funds to an account specified by the Company. Delivery of the Shares shall be made through the facilities of The Depository Trust Company unless the Representative shall otherwise instruct. The Company shall physically deliver, or cause to be delivered, the Warrants to the purchasers thereof, in accordance with the Representative's instructions, on the Closing Date.

Notwithstanding the foregoing, the Company and the Representative shall instruct purchasers of the Pre-Funded Warrants and accompanying Share Warrants in the public offering to make payment for the Pre-Funded Warrants and Share Warrants on the Closing Date to the Company by wire transfer in immediately available funds to the account specified by the Company at a purchase price of \$0.9999 per Pre-Funded Warrant and accompanying Share Warrant, in lieu of payment by the Underwriters for such Pre-Funded Warrants and Share Warrants, and the Company shall deliver such Pre-Funded Warrants and Share Warrants to such purchasers on the Closing Date in definitive form against such payment, in lieu of the Company's obligation to deliver such Pre-Funded Warrants and Share Warrants and Share Warrants to the Underwriters; provided that, upon receipt by the Company of payment for the Pre-Funded Warrants and Share Warrants, the Company shall promptly (but in no event later than the Closing Date), pay \$0.07 per such Pre-Funded Warrant and accompanying Share Warrant to the Underwriters by wire transfer in immediately available funds to the account specified by the Representative.

In the event that any purchaser of the Pre-Funded Warrants in the public offering fails to make payment to the Company for all or part of the Pre-Funded Warrants on the Closing Date, the Representative may elect, by written notice to the Company, to receive shares of Common Stock and Share Warrants at the Share Purchase Price in lieu of all or a portion of such Pre-Funded Warrants to be delivered to the Underwriters under this Agreement.

4. <u>Offering by Underwriters</u>. It is understood that the several Underwriters propose to offer the Securities for sale to the public as set forth in the Prospectus.

- 5. Agreements. The Company agrees with the several Underwriters that:
- Prior to the termination of the offering of the Securities, the Company will not file any amendment of the Registration Statement or supplement (including the Prospectus or any Preliminary Prospectus) to the Base Prospectus or any Rule 462(b) Registration Statement unless the Company has furnished you a copy for your review prior to filing and will not file any such proposed amendment or supplement to which you reasonably object. The Company will cause the Prospectus, properly completed, and any supplement thereto to be filed in a form approved by the Representative with the SEC pursuant to the applicable paragraph of Rule 424(b) within the time period prescribed and will provide evidence satisfactory to the Representative of such timely filing. The Company will promptly advise the Representative (i) when the Prospectus, and any supplement thereto, shall have been filed (if required) with the SEC pursuant to Rule 424(b) or when any Rule 462(b) Registration Statement shall have been filed with the SEC, (ii) when, prior to termination of the offering of the Securities, any amendment to the Registration Statement shall have been filed or become effective, (iii) of any request by the SEC or its staff for any amendment of the Registration Statement, or any Rule 462(b) Registration Statement, or for any supplement to the Prospectus or for any additional information, (iv) of the issuance by the SEC of any stop order suspending the effectiveness of the Registration Statement or of any notice objecting to its use or the institution or threatening of any proceeding for that purpose and (v) of the receipt by the Company of any notification with respect to the suspension of the qualification of the Securities for sale in any jurisdiction or the institution or threatening of any proceeding for such purpose. The Company will use its reasonable best efforts to prevent the issuance of any such stop order or the occurrence of any such suspension or objection to the use of the Registration Statement and, upon such issuance, occurrence or notice of objection, to obtain as soon as possible the withdrawal of such stop order or relief from such occurrence or objection, including, if necessary, by filing an amendment to the Registration Statement or a new registration statement and using its reasonable best efforts to have such amendment or new registration statement declared effective as soon as practicable.
- (b) If, at any time prior to the filing of the Prospectus pursuant to Rule 424(b), any event occurs as a result of which the Disclosure Package would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein in the light of the circumstances under which they were made or the circumstances then prevailing not misleading, the Company will (i) notify promptly the Representative so that any use of the Disclosure Package may cease until it is amended or supplemented; (ii) amend or supplement the Disclosure Package to correct such statement or omission; and (iii) supply any amendment or supplement to you in such quantities as you may reasonably request.

- (c) If, at any time when a prospectus relating to the Securities is required to be delivered under the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act ("Rule 172")), any event occurs as a result of which the Prospectus as then supplemented would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein in the light of the circumstances under which they were made or the circumstances then prevailing not misleading, or if it shall be necessary to amend the Registration Statement or supplement the Prospectus to comply with the Securities Act or the Exchange Act or the respective rules thereunder, the Company promptly will (i) notify the Representative of any such event; (ii) prepare and file with the SEC, subject to the second sentence of paragraph (a) of this Section 5, an amendment or supplement which will correct such statement or omission or effect such compliance; and (iii) supply any supplemented Prospectus to you in such quantities as you may reasonably request.
- (d) As soon as practicable, the Company will make generally available to its security holders and to the Representative an earnings statement or statements of the Company and its subsidiaries that will satisfy the provisions of Section 11(a) of the Securities Act and Rule 158 under the Securities Act.
- (e) Upon request, the Company will furnish to the Representative and counsel for the Underwriters, without charge, signed copies of the Registration Statement (including exhibits thereto) and to each other Underwriter a copy of the Registration Statement (without exhibits thereto) and, so long as delivery of a prospectus by an Underwriter or dealer may be required by the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172), as many copies of each Preliminary Prospectus, the Prospectus and each Issuer Free Writing Prospectus and any supplement thereto as the Representative may reasonably request. The Company will pay the expenses of printing or other production of all documents relating to the offering.
- (f) The Company will arrange, if necessary, for the qualification of the Securities for sale under the laws of such jurisdictions as the Representative reasonably may designate and will maintain such qualifications in effect so long as required for the distribution of the Securities; provided that in no event shall the Company be obligated to qualify to do business in any jurisdiction where it is not now so qualified or to take any action that would subject it to service of process in suits, other than those arising out of the offering or sale of the Securities, in any jurisdiction where it is not now so subject.

- The Company will not, without the prior written consent of the Representative, 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 60 days after the date of this Agreement; provided, however, that the Company may (i) effect the transactions contemplated hereby, (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 Registration Statement, the Disclosure Package and the Prospectus (collectively, the "Company Plans"), (iii) issue the Warrants and the Warrant Shares and issue shares of Common Stock issuable upon the conversion of securities outstanding at the Execution Time or the exercise of warrants or options or the settlement of restricted stock units outstanding at the Execution Time 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 provide to the Representative a signed lockup letter in the form described in Section 6(k) and attached as Exhibit A hereto.
- (h) The Company will not take, directly or indirectly (without giving effect to activities by the Underwriters), any action designed to or that would constitute or that might reasonably be expected to cause or result in, under the Exchange Act or otherwise, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

- The Company agrees to pay the costs and expenses relating to the following matters: (i) the preparation, printing or reproduction and filing with the SEC of the Registration Statement (including financial statements and exhibits thereto), each Preliminary Prospectus, the Prospectus and each Issuer Free Writing Prospectus, and each amendment or supplement to any of them; (ii) the printing (or reproduction) and delivery (including postage, air freight charges and charges for counting and packaging) of such copies of the Registration Statement, each Preliminary Prospectus, the Prospectus and each Issuer Free Writing Prospectus, and all amendments or supplements to any of them, as may, in each case, be reasonably requested for use in connection with the offering and sale of the Securities; (iii) the preparation, printing, authentication, issuance and delivery of certificates for the Securities, including any stamp or transfer taxes in connection with the original issuance and sale of the Securities; (iv) the printing (or reproduction) and delivery of this Agreement, any blue sky memorandum and all other agreements or documents printed (or reproduced) and delivered in connection with the offering of the Securities; (v) the registration of the Securities under the Exchange Act and the listing of the Securities and the Warrant Shares on the Nasdaq Global Market; (vi) any registration or qualification of the Securities for offer and sale under the securities or blue sky laws of the several states (including filing fees and up to a maximum aggregate amount of \$7,500 for the reasonable fees and expenses of counsel for the Underwriters relating to such registration and qualification); (vii) any filings required to be made with the Financial Industry Regulatory Authority, Inc. ("FINRA") (including filing fees and up to a maximum aggregate amount of \$30,000 for the reasonable fees and expenses of counsel for the Underwriters relating to such filings); (viii) the transportation and other expenses incurred by or on behalf of Company representatives in connection with presentations to prospective purchasers of the Securities; provided, however, that if the Representative and the Company mutually agree that an aircraft shall be chartered in connection with any road show, the Company shall be responsible for 50% of the costs and expenses of such chartered aircraft and the Underwriters shall be responsible for the remaining 50% of such costs and expenses; (ix) the fees and expenses of the Company's accountants and the fees and expenses of counsel (including local and special counsel) for the Company; (x) the costs of reproducing and distributing each of the Warrants; and (xi) all other costs and expenses incident to the performance by the Company of its obligations hereunder.
- Underwriter, severally and not jointly, agrees with the Company that, unless it has or shall have obtained, as the case may be, the prior written consent of the Company, it has not made and will not make any offer relating to the Securities that would constitute an Issuer Free Writing Prospectus or that would otherwise constitute a Free Writing Prospectus required to be filed by the Company with the SEC or retained by the Company under Rule 433 under the Securities Act ("Rule 433"); provided that the prior written consent of the parties hereto shall be deemed to have been given in respect of the Free Writing Prospectuses included in Schedule II hereto and any electronic road show. Any such free writing prospectus consented to by the Representative or the Company is hereinafter referred to as a "Permitted Free Writing Prospectus." The Company agrees that (x) it has treated and will treat, as the case may be, each Permitted Free Writing Prospectus as an Issuer Free Writing Prospectus and (y) it has complied and will comply, as the case may be, with the requirements of Rule 164 under the Securities Act ("Rule 164") and Rule 433 applicable to any Permitted Free Writing Prospectus, including in respect of timely filing with the SEC, legending and record keeping.

- (k) The Company will promptly notify the Representative if the Company ceases to be an Emerging Growth Company at any time prior to the later of (a) completion of the distribution of the Securities within the meaning of the Securities Act and (b) completion of the 60-day restricted period referred to in Section 5(g) hereof.
- (l) The Company shall, at all times while any Warrants are outstanding, use its commercially reasonable best efforts to maintain a registration statement covering the issue and sale of the Warrant Shares upon exercise of the Warrants such that the Warrant Shares, when issued, will not be subject to resale restrictions under the Securities Act except to the extent that the Warrant Shares are owned by affiliates. The Company shall, at all times while any Warrants are outstanding, reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved shares of Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of such Warrants, the number of Warrant Shares that are initially issuable and deliverable upon the exercise of the then-outstanding Warrants.
- 6. <u>Conditions to the Obligations of the Underwriters</u>. The obligations of the Underwriters to purchase the Securities shall be subject to the accuracy of the representations and warranties on the part of the Company contained herein as of the Execution Time and as of the Closing Date, to the accuracy of the statements of the Company made in any certificates pursuant to the provisions hereof, to the performance by the Company of its obligations hereunder and to the following additional conditions:
 - (a) The Prospectus, and any supplement thereto, have been filed in the manner and within the time period required by Rule 424(b); any material required to be filed by the Company pursuant to Rule 433(d) shall have been filed with the SEC within the applicable time periods prescribed for such filings by Rule 433; and no stop order suspending the effectiveness of the Registration Statement or any notice objecting to its use shall have been issued and no proceedings for that purpose shall have been instituted or threatened.
 - (b) The Company shall have requested and caused Skadden, Arps, Slate, Meagher & Flom LLP, counsel for the Company, to have furnished to the Representative their opinions and 10b-5 statement, dated the Closing Date and addressed to the Representative, in form and substance acceptable to you.
 - (c) The Company shall have requested and caused Hogan Lovells US LLP, intellectual property counsel for the Company, to have furnished to the Representative their opinion, dated the Closing Date and addressed to the Representative, in form and substance acceptable to you.

- (d) The Representative shall have received from Davis Polk & Wardwell LLP, counsel for the Underwriters, such opinion or opinions, dated the Closing Date and addressed to the Representative, with respect to the issuance and sale of the Securities, the Registration Statement, the Disclosure Package, the Prospectus (together with any supplement thereto) and other related matters as the Representative may reasonably require, and the Company shall have furnished to such counsel such documents as they request for the purpose of enabling them to pass upon such matters.
- (e) The Company shall have furnished to the Representative a certificate of the Company, signed by the Chief Executive Officer and the principal financial or accounting officer of the Company, dated the Closing Date, to the effect that the signers of such certificate have carefully examined the Registration Statement, the Disclosure Package, the Prospectus and any amendment or supplement thereto, as well as each electronic road show used in connection with the offering of the Securities, and this Agreement and that:
 - (i) the representations and warranties of the Company in this Agreement are true and correct on and as of the Closing Date with the same effect as if made on the Closing Date and the Company has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to the Closing Date;
 - (ii) no stop order suspending the effectiveness of the Registration Statement or any notice objecting to its use has been issued and no proceedings for that purpose have been instituted or, to the Company's knowledge, threatened; and
 - (iii) since the date of the most recent financial statements included or incorporated by reference in the Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto), there has been no material adverse change in the condition (financial or otherwise), prospects, earnings, business or properties of the Company and its subsidiaries, taken as a whole, whether or not arising from transactions in the ordinary course of business, except as set forth in or contemplated in the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).
- (f) The Company shall have requested and caused Ernst & Young LLP to have furnished to the Representative, at the Execution Time and at the Closing Date, letters, dated respectively as of the Execution Time and as of the Closing Date, in form and substance acceptable to you.
- Subsequent to the Execution Time or, if earlier, the dates as of which information is given in the Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto), there shall not have been (i) any change or decrease specified in the letter or letters referred to in paragraph (e) of this Section 6 or (ii) any change, or any development involving a prospective change, in or affecting the condition (financial or otherwise), earnings, business or properties of the Company and its subsidiaries taken as a whole, whether or not arising from transactions in the ordinary course of business, except as set forth in or contemplated in the Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto) the effect of which, in any case referred to in clause (i) or (ii) above, is, in the sole judgment of the Representative, so material and adverse as to make it impractical or inadvisable to proceed with the offering or delivery of the Securities as contemplated by the Registration Statement, the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

- (h) Prior to the Closing Date, the Company shall have furnished to the Representative such further information, certificates and documents as the Representative may reasonably request.
- (i) The Securities shall have been listed and admitted and authorized for trading on the Nasdaq Global Market, and satisfactory evidence of such actions shall have been provided to the Representative.
- (j) At the Execution Time, the Company shall have furnished to the Representative a letter substantially in the form of Exhibit A hereto from each officer and director of the Company and each of the other holders set forth on Schedule IV hereto.

If any of the conditions specified in this Section 6 shall not have been fulfilled when and as provided in this Agreement, or if any of the opinions and certificates mentioned above or elsewhere in this Agreement shall not be reasonably satisfactory in form and substance to the Representative and counsel for the Underwriters, this Agreement and all obligations of the Underwriters hereunder may be canceled at, or at any time prior to, the Closing Date by the Representative. Notice of such cancellation shall be given to the Company in writing or by telephone or facsimile confirmed in writing.

The documents required to be delivered by this Section 6 shall be delivered at the office of Davis Polk & Wardwell LLP, counsel for the Underwriters, at 450 Lexington Avenue, New York, New York, 10017, on the Closing Date.

7. Reimbursement of Underwriters' Expenses. If the sale of the Securities provided for herein is not consummated because any condition to the obligations of the Underwriters set forth in Section 6 hereof is not satisfied, because of any termination pursuant to Section 10 hereof or because of any refusal, inability or failure on the part of the Company to perform any agreement herein or comply with any provision hereof other than by reason of a default by any of the Underwriters, the Company will reimburse the Underwriters severally through SVB Securities LLC on demand for all documented expenses (including reasonable fees and disbursements of counsel for the Underwriters) that shall have been incurred by them in connection with the proposed purchase and sale of the Securities.

8. Indemnification and Contribution.

- (a) The Company agrees to indemnify and hold harmless each Underwriter, the directors, officers, employees, affiliates and agents of each Underwriter and each person who controls any Underwriter within the meaning of either the Securities Act or the Exchange Act against any and all losses, claims, damages or liabilities, joint or several, to which they or any of them may become subject under the Securities Act, the Exchange Act or other U.S. Federal or state statutory law or regulation, at common law or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of a material fact contained in the registration statement for the registration of the Securities as originally filed or in any amendment thereof, or in the Base Prospectus, any Preliminary Prospectus, or any other preliminary prospectus supplement relating to the Securities, the Prospectus, or any Issuer Free Writing Prospectus, or in any amendment thereof or supplement thereto, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, and agrees to reimburse each such indemnified party, as incurred, for any documented legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability or action; *provided, however*, that the Company will not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon any such untrue statement or alleged untrue statement or omission or alleged omission made therein in reliance upon and in conformity with written information furnished to the Company by or on behalf of any Underwriter through the Representative specifically for inclusion therein. This indemnity agreement will be in addition to any liability which the Company may otherwise have.
- (b) Each Underwriter severally and not jointly agrees to indemnify and hold harmless the Company, each of its directors, each of its officers who signs the Registration Statement, and each person who controls the Company within the meaning of either the Securities Act or the Exchange Act, to the same extent as the foregoing indemnity from the Company to each Underwriter, but only with reference to written information relating to such Underwriter furnished to the Company by or on behalf of such Underwriter through the Representative specifically for inclusion in the documents referred to in the foregoing indemnity. This indemnity agreement will be in addition to any liability which any Underwriter may otherwise have. The Company acknowledges that the statements set forth (i) in the last paragraph of the cover page regarding delivery of the Securities and, under the heading "Underwriting" or "Plan of Distribution," (ii) the list of Underwriters and their respective participation in the sale of the Securities, (iii) the sentences related to concessions and reallowances and (iv) the paragraph related to stabilization, syndicate covering transactions and penalty bids in the Preliminary Prospectus and the Prospectus or any Issuer Free Writing Prospectus.

Promptly after receipt by an indemnified party under this Section 8 of notice of the commencement of any action, such (c) indemnified party will, if a claim in respect thereof is to be made against the indemnifying party under this Section 8, notify the indemnifying party in writing of the commencement thereof; but the failure so to notify the indemnifying party (i) will not relieve it from liability under paragraph (a) or (b) above unless and to the extent it did not otherwise learn of such action and such failure results in the forfeiture by the indemnifying party of substantial rights and defenses and (ii) will not, in any event, relieve the indemnifying party from any obligations to any indemnified party other than the indemnification obligation provided in paragraph (a) or (b) above. The indemnifying party shall be entitled to appoint counsel of the indemnifying party's choice at the indemnifying party's expense to represent the indemnified party in any action for which indemnification is sought (in which case the indemnifying party shall not thereafter be responsible for the fees and expenses of any separate counsel retained by the indemnified party or parties except as set forth below); provided, however, that such counsel shall be satisfactory to the indemnified party. Notwithstanding the indemnifying party's election to appoint counsel to represent the indemnified party in an action, the indemnified party shall have the right to employ separate counsel (including local counsel), and the indemnifying party shall bear the reasonable fees, costs and expenses of such separate counsel if (i) the use of counsel chosen by the indemnifying party to represent the indemnified party would present such counsel with a conflict of interest, (ii) the actual or potential defendants in, or targets of, any such action include both the indemnified party and the indemnifying party and the indemnified party shall have reasonably concluded that there may be legal defenses available to it and/or other indemnified parties which are different from or additional to those available to the indemnifying party, (iii) the indemnifying party shall not have employed counsel satisfactory to the indemnified party to represent the indemnified party within a reasonable time after notice of the institution of such action or (iv) the indemnifying party shall authorize the indemnified party to employ separate counsel at the expense of the indemnifying party. An indemnifying party will not, without the prior written consent of the indemnified parties, settle or compromise or consent to the entry of any judgment with respect to any pending or threatened claim, action, suit or proceeding in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified parties are actual or potential parties to such claim or action) unless such settlement, compromise or consent (i) includes an unconditional release of each indemnified party from all liability arising out of such claim, action, suit or proceeding and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act, by or on behalf of any indemnified party.

In the event that the indemnity provided in paragraph (a) or (b) of this Section 8 is unavailable to or insufficient to hold (d) harmless an indemnified party for any reason, the Company and the Underwriters severally agree to contribute to the aggregate losses, claims. damages and liabilities (including legal or other expenses reasonably incurred in connection with investigating or defending the same) (collectively, "Losses") to which the Company and one or more of the Underwriters may be subject in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and by the Underwriters on the other from the offering of the Securities. If the allocation provided by the immediately preceding sentence is unavailable for any reason, the Company and the Underwriters severally shall contribute in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company on the one hand and of the Underwriters on the other in connection with the statements or omissions which resulted in such Losses as well as any other relevant equitable considerations. Benefits received by the Company shall be deemed to be equal to the total net proceeds from the offering (before deducting expenses) received by it, and benefits received by the Underwriters shall be deemed to be equal to the total underwriting discounts and commissions, in each case as set forth on the cover page of the Prospectus. Relative fault shall be determined by reference to, among other things, whether any untrue or any alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information provided by the Company on the one hand or the Underwriters on the other, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such untrue statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contribution were determined by pro rata allocation or any other method of allocation which does not take account of the equitable considerations referred to above. Notwithstanding the provisions of this paragraph, in no event shall an Underwriter be required to contribute any amount in excess of the amount by which the total underwriting discounts and commissions received by such Underwriter with respect to the offering of the Securities exceeds the amount of any damages that such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. Notwithstanding the provisions of this paragraph, no person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 8, each person who controls an Underwriter within the meaning of either the Securities Act or the Exchange Act and each director, officer, employee, affiliate and agent of an Underwriter shall have the same rights to contribution as such Underwriter, and each person who controls the Company within the meaning of either the Securities Act or the Exchange Act, each officer of the Company who shall have signed the Registration Statement and each director of the Company shall have the same rights to contribution as the Company, subject in each case to the applicable terms and conditions of this paragraph.

- 9. <u>Default by an Underwriter</u>. If any one or more Underwriters shall fail to purchase and pay for any of the Securities agreed to be purchased by such Underwriter or Underwriters hereunder and such failure to purchase shall constitute a default in the performance of its or their obligations under this Agreement, the remaining Underwriters shall be obligated severally to take up and pay for (in the respective proportions which the amount of Securities set forth opposite their names in Schedule I hereto bears to the aggregate amount of Securities set forth opposite the names of all the remaining Underwriters) the Securities which the defaulting Underwriter or Underwriters agreed but failed to purchase; *provided, however*, that in the event that the aggregate amount of Securities which the defaulting Underwriter or Underwriters agreed but failed to purchase shall exceed 10% of the aggregate amount of Securities set forth in Schedule I hereto, the remaining Underwriters shall have the right to purchase all, but shall not be under any obligation to purchase any, of the Securities, and if such non-defaulting Underwriters do not purchase all the Securities, this Agreement will terminate without liability to <u>any</u> non-defaulting Underwriter or the Company. In the event of a default by any Underwriter as set forth in this Section 9, the Closing Date shall be postponed for such period, not exceeding five Business Days, as the Representative shall determine in order that the required changes in the Registration Statement and the Prospectus or in any other documents or arrangements may be effected. Nothing contained in this Agreement shall relieve any defaulting Underwriter of its liability, if any, to the Company and any non-defaulting Underwriter for damages occasioned by its default hereunder.
- Termination. This Agreement shall be subject to termination in the absolute discretion of the Representative, by notice given to the Company prior to delivery of and payment for the Securities, if at any time prior to such delivery and payment (i) trading in the Company's Common Stock shall have been suspended by the SEC or Nasdaq Global Market or trading in securities generally on the New York Stock Exchange or the Nasdaq Stock Market shall have been suspended or limited or minimum prices shall have been established on either of such exchanges, (ii) a banking moratorium shall have been declared either by Federal or New York State authorities, (iii) there shall have occurred a material disruption in commercial banking or securities settlement or clearance services or (iv) there shall have occurred any outbreak or escalation of hostilities, declaration by the United States of a national emergency or war, or other calamity or crisis the effect of which on financial markets is such as to make it, in the sole judgment of the Representative, impractical or inadvisable to proceed with the offering or delivery of the Securities as contemplated by the Preliminary Prospectus or the Prospectus (exclusive of any amendment or supplement thereto).
- Representations and Indemnities to Survive. The respective agreements, representations, warranties, indemnities and other statements of the Company or its officers and of the Underwriters set forth in or made pursuant to this Agreement will remain in full force and effect, regardless of any investigation made by or on behalf of any Underwriter or the Company or any of the officers, directors, employees, agents, affiliates or controlling persons referred to in Section 8 hereof, and will survive delivery of and payment for the Securities. The provisions of Sections 7 and 8 hereof shall survive the termination or cancellation of this Agreement.

- Notices. All communications hereunder will be in writing and effective only on receipt, and, if sent to the Representative, will be mailed, delivered or telefaxed to SVB Securities LLC at 1301 Avenue of the Americas, 12th Floor, New York, New York, 10019, Attention: Stuart R. Nayman, with a copy (which shall not constitute notice) to Davis Polk & Wardwell LLP at 450 Lexington Avenue, New York, New York 10017, Attention: Richard D. Truesdell, Jr., facsimile number: +1 (212) 701-5674; or, if sent to the Company, will be mailed or delivered to it at Applied Therapeutics, Inc., 545 5th Avenue, Suite 1400, New York, New York 10017, Attention: Shoshana Shendelman, with a copy (which shall not constitute notice) to Skadden, Arps, Slate, Meagher & Flom LLP, One Manhattan West, New York, New York 10001-8602, Attention: Michael Schwartz, facsimile number +1 (917) 777-3694.
- 13. <u>Successors</u>. This Agreement will inure to the benefit of and be binding upon the parties hereto and their respective successors and the officers, directors, employees, agents and controlling persons referred to in Section 8 hereof, and no other person will have any right or obligation hereunder.
- Jurisdiction. The Company agrees that any suit, action or proceeding against the Company brought by any Underwriter, the directors, officers, employees, affiliates and agents of any Underwriter, or by any person who controls any Underwriter, arising out of or based upon this Agreement or the transactions contemplated hereby may be instituted in any State or U.S. federal court in The City of New York and County of New York, and waives any objection which it may now or hereafter have to the laying of venue of any such proceeding, and irrevocably submits to the non-exclusive jurisdiction of such courts in any suit, action or proceeding.

15. Recognition of the U.S. Special Resolution Regimes.

- (a) In the event that any Underwriter that is a Covered Entity becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from such Underwriter of this Agreement, and any interest and obligation in or under this Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.
- (b) In the event that any Underwriter that is a Covered Entity or a BHC Act Affiliate of such Underwriter becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against such Underwriter are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States.

As used in this Section 15, "BHC Act Affiliate" has the meaning assigned to the term "affiliate" in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k); "Covered Entity" means any of the following: (i) a "covered entity" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b), (ii) a "covered bank" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b) or (iii) a "covered FSI" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b); "Default Right" has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable; and "U.S. Special Resolution Regime" means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

- 16. No Fiduciary Duty. The Company hereby acknowledges that (a) the purchase and sale of the Securities pursuant to this Agreement is an arm's-length commercial transaction between the Company, on the one hand, and the Underwriters and any affiliate through which it may be acting, on the other, (b) the Underwriters are acting as principal and not as an agent or fiduciary of the Company and (c) the Company's engagement of the Underwriters in connection with the offering and the process leading up to the offering is as independent contractors and not in any other capacity. Furthermore, the Company agrees that it is solely responsible for making its own judgments in connection with the offering (irrespective of whether any of the Underwriters has advised or is currently advising the Company on related or other matters). The Company agrees that it will not claim that the Underwriters have rendered advisory services of any nature or respect, or owe an agency, fiduciary or similar duty to the Company, in connection with such transaction or the process leading thereto.
- 17. <u>Integration</u>. This Agreement supersedes all prior agreements and understandings (whether written or oral) between the Company and the Underwriters, or any of them, with respect to the subject matter hereof.
- 18. <u>Applicable Law</u>. This Agreement will be governed by and construed in accordance with the laws of the State of New York applicable to contracts made and to be performed within the State of New York.
- 19. <u>Waiver of Jury Trial</u>. The Company and the Underwriters hereby irrevocably waive, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.
- 20. <u>Counterparts</u>. This Agreement may be signed in one or more counterparts, each of which shall constitute an original and all of which together shall constitute one and the same agreement.

21. <u>Headings</u> . The section headings used herein are for convenience only and shall not affect the construction herec	eof.
---	------

[Signature pages follow]

If the foregoing is in accordance with your understanding of our agreement, please sign and return to us the enclosed duplicate hereof, whereupon this letter and your acceptance shall represent a binding agreement among the Company and the several Underwriters.

Very truly yours,

Applied Therapeutics, Inc.

By: /s/ Shoshana Shendelman

Name: Shoshana Shendelman

The foregoing Agreement is hereby confirmed and accepted as of the date first above written.

SVB Securities LLC

By: SVB Securities LLC

By: /s/ Anurag Jindal

Name: Anurag Jindal
Title: Sr. Managing Director

For itself and the other several Underwriters named in Schedule I to the foregoing Agreement.

SCHEDULE I

	Number of Shares to be	Number of Share Warrants to	Number of Pre-Funded Warrants to
Underwriters	Purchased	be Purchased	be Purchased
SVB Securities LLC	20,000,000	30,000,000	10,000,000
Total:	20,000,000	30,000,000	10,000,000

SCHEDULE II

Schedule of Free Writing Prospectuses included in the Disclosure Package:

None.

II-1

SCHEDULE III Pricing Information

Public offering price per Share and Share Warrant: \$1.00

Number of Shares: 20,000,000

Number of Pre-Funded Warrants: 10,000,000

Public offering price per Pre-Funded Warrant and Share Warrant: \$0.9999

Number of Share Warrants: 30,000,000

Share Warrant exercise price per share of Common Stock: \$1.00

Termination Date of Pre-Funded Warrants and Share Warrants: June 27, 2027

Schedule IV

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

A 7	N T	N T	T 37	
А	N	N	EΧ	Α

List of Subsidiaries:

None

Annex A-1

[Form of Lock-Up Agreement]

Applied Therapeutics, Inc.
Public Offering of Common Stock

, 2022

SVB Securities LLC

As Representative of the several Underwriters,

c/o SVB Securities LLC 1301 Avenue of the Americas, 12th Floor New York, NY 10019

Ladies and Gentlemen:

This letter agreement is being delivered to you in connection with the proposed underwriting agreement (the "<u>Underwriting Agreement</u>"), between Applied Therapeutics, Inc., a Delaware corporation (the "<u>Company</u>"), and each of you as representatives of a group of Underwriters named therein, relating to an underwritten public offering of Common Stock, \$0.0001 par value (the "<u>Common Stock</u>"), of the Company (the "<u>Offering</u>").

In order to induce you and the other Underwriters to enter into the Underwriting Agreement, the undersigned will not, without the prior written consent of the Representative, offer, sell, contract to sell, pledge or otherwise dispose of, (or enter into any transaction which 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 undersigned or any affiliate of the undersigned or any person in privity with the undersigned or any affiliate of the undersigned), directly or indirectly, including the filing (or participation in the filing) of a registration statement with the Securities and Exchange Commission 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 Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules and regulations of the Securities and Exchange Commission promulgated thereunder with respect to, any shares of capital stock of the Company or any securities convertible into, or exercisable or exchangeable for such capital stock, or publicly announce an intention to effect any such transaction, for a period from the date hereof until 60 days after the date of the Underwriting Agreement (the "Lock-Up Period").

The foregoing restrictions shall not apply to the transfer of shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock:

(i) as a bona fide gift;

- (ii) by will, testamentary document or intestate succession upon the death of the undersigned to the legal representative, heir, beneficiary or a member of the immediate family (as defined below) of the undersigned;
- (iii) to an immediate family member of the undersigned or to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned;
- (iv) if the undersigned is a trust, to a trustor, trustee or beneficiary of the trust or to the estate of a trustor, trustee or beneficiary of such trust;
- (v) as a distribution by a partnership to its limited or general partners or by a limited liability company to its members or by a corporation to its stockholders or to any wholly owned subsidiary of such corporation or by any other entity to its equityholders;
- (vi) to any affiliate, as defined in Rule 405 under the Securities Act of 1933, as amended, of the undersigned, or any investment fund or other entity under common control or management by entities that are affiliates of the undersigned;
 - (vii) pursuant to a domestic order or negotiated divorce settlement;
- (viii) in connection with the withholding of shares by, or surrender of shares to, the Company to cover the payment of taxes due upon or consideration required in connection with the vesting, conversion or exercise of securities issued under an equity incentive plan or stock purchase plan of the Company described in the Registration Statement (including documents incorporated therein by reference), or pursuant to a "net" or "cashless" exercise or settlement feature; *provided* that if the undersigned is required to make a filing under the Exchange Act, such filing shall include a footnote describing the purpose of the transaction; or
- (ix) transactions relating to shares of Common Stock acquired in the Offering or in open market transactions after the completion of the Offering;
- (x) under any existing trading plan pursuant to Rule 10b5-1 under the Exchange Act that has been disclosed to the Representative prior to the date hereof;

provided that (A) in the case of any transfer, disposition or distribution pursuant to clauses (i) through (vii) above, each transferee, done or distributee shall execute and deliver a lock-up agreement in the form of this letter agreement to the Representative, (B) in the case of any transfer, disposition or distribution pursuant to clauses (i) through (iv) above, such transfer, disposition or distribution does not involve a disposition for value and (C) in the case of any transfer, disposition or distribution pursuant to (i)-(vi) and (ix), no filing by any party (transferor, transferee, donor or donee) under the Exchange Act or other public announcement shall be required or shall be voluntarily made in connection with such transfer, disposition or distribution during the Lock-Up Period (other than a filing on a Form 5 made after the expiration of the Lock-Up Period or a filing required by Schedule 13D or 13G).

Furthermore, no provision in this letter agreement shall be deemed to restrict or prohibit:

- (1) the transfer of the undersigned's Common Stock or any security convertible into or exercisable or exchangeable for Common Stock to the Company in connection with the termination of the undersigned's employment with the Company or pursuant to contractual arrangements under which the Company has the option to repurchase such shares; *provided* that if the undersigned is required to file a report under the Exchange Act reporting a reduction in beneficial ownership of shares of Common Stock during the Lock-Up Period, the undersigned shall clearly indicate in the footnotes thereto that the filing relates to the termination of the undersigned's employment and *provided further* no filing under the Exchange Act or other public announcement shall be voluntarily made in connection with such transfer;
- (2) the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of Common Stock; *provided* that such plan does not provide for any transfers of Common Stock during the Lock-Up Period and no public disclosure of any such action shall be required or shall be voluntarily made during the Lock-Up Period;
- (3) the exercise, vesting or settlement, as applicable, by the undersigned of any option to purchase any shares of Common Stock or other equity awards pursuant to any stock incentive plan or stock purchase plan of the Company described in the Registration Statement (including documents incorporated therein by reference); *provided* that the underlying shares of Common Stock shall continue to be subject to the restrictions set forth in this letter agreement for the duration of the Lock-Up Period and no filing by any party under the Exchange Act or other public announcement shall be required or shall be voluntarily made during the Lock-Up Period other than a filing on a Form 5 made after the expiration of the Lock-Up Period or, in the case of a "net" exercise, a filing on a Form 4 that reports such "net" exercise under transaction code "F" or a filing required by Schedule 13D or 13G;

(4) [RESERVED]; or

(5) the transfer of shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock pursuant to a bona fide third-party tender offer for securities of the Company, merger, consolidation or other similar transaction that is approved by the board of directors of the Company, made to all holders of Common Stock involving a change of control (as defined below); *provided* that all of the undersigned's securities subject to this letter agreement that are not so transferred, sold, tendered or otherwise disposed of remain subject to this letter agreement for the duration of the Lock-Up Period, and *provided further* that it shall be a condition of the transfer that if the tender offer, merger, consolidation or other such transaction is not completed, the undersigned's securities subject to this letter agreement shall remain subject to the restrictions herein for the duration of the Lock-Up Period.

For purposes of this letter agreement, (i) "<u>immediate family</u>" shall mean any relationship by blood, marriage or adoption, not more remote than first cousin, and (ii) "<u>change of control</u>" means any bona fide third party tender offer, merger, consolidation or other similar transaction, in one transaction or a series of related transactions, the result of which is that any "person" (as defined in Section 13(d)(3) of the Exchange Act), or group of affiliated persons, other than the Company, becomes the beneficial owner (as defined in Rules 13d-3 and 13d-5 of the Exchange Act) of 50% or more of the total voting power of the voting stock of the Company (or the surviving entity).

The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of the undersigned's shares of Common Stock, except in compliance with the foregoing restrictions.

The undersigned agrees that, without the prior written consent of the Representative, it will not, during the Lock-Up Period, make any demand for or exercise any right with respect to, the registration of any shares of capital stock of the Company or any securities convertible into, or exercisable or exchangeable for such capital stock and hereby waives any and all notice requirements and other rights (including, if applicable, those rights set forth in that certain Amended and Restated Investors' Rights Agreement, dated as of November 4, 2018, by and among the Company and certain stockholders of the Company), with respect to any such registration, including with respect to the Offering.

This letter agreement shall automatically terminate and be of no further effect upon the earliest to occur, if any, of the following: (i) prior to the execution of the Underwriting Agreement, upon such date the Company, on the one hand, or the Representative, on the other hand, notifies the other in writing that it does not intend to proceed with the Offering, (ii) the Underwriting Agreement is not executed before July 31, 2022 (provided that the Company may, by written notice to the undersigned prior to July 31, 2022, extend such date for a period of up to an additional three (3) months in the event that the Underwriting Agreement has not been executed by such date) or (iii) upon the termination (other than the provisions thereof that survive termination) of the Underwriting Agreement in accordance with the terms thereof prior to payment for and delivery of the shares of Common Stock to be sold thereunder.

The undersigned hereby consents to receipt of this letter agreement in electronic form and understands and agrees that this letter agreement may be signed electronically. In the event that any signature is delivered by facsimile transmission, electronic mail, or otherwise by electronic transmission evidencing an intent to sign this letter agreement, such facsimile transmission, electronic mail or other electronic transmission shall create a valid and binding obligation of the undersigned with the same force and effect as if such signature were an original. Execution and delivery of this letter agreement by facsimile transmission, electronic mail or other electronic transmission is legal, valid and binding for all purposes. This letter agreement shall be governed by and construed in accordance with the laws of the State of New York applicable to contracts made and to be performed within the State of New York.

[Signature Page Follows]

Yours very truly,

IF AN INDIVIDUAL:	IF AN ENTITY:
By: (duly authorized signature)	(please print complete name of entity)
Name:(please print full name)	By: (duly authorized signature)
	Name:(please print full name)
	Title:(please print full title)
Address:	Address:
E-mail:	E-mail:

FORM OF WARRANT

COMMON STOCK PURCHASE WARRANT **Applied Therapeutics, Inc.**

Warrant Shares:	Issue Date:	, 2022
THIS COMMON STOCK PURCHASE WARRANT (the "Warrant") certifies that, for value received,	or its ass	signs
(the "Holder") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any t	ime on or after th	ne date
hereof (the "Issue Date") and on or prior to 5:00 p.m. (New York City time) on June 27, 2027, (the "Termination Date") but not the	ereafter, to subscr	ribe for
and purchase from Applied Therapeutics, Inc., a Delaware corporation (the "Company"), up to shares (as subject to adj	ustment hereunde	er, the
"Warrant Shares") of common stock, \$0.0001 par value per share, of the Company ("Common Stock"). The purchase price of one	share of Commo	n 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 Underwriting Agreement (the "Underwriting Agreement"), dated June 22, 2022, among the Company and SVB Securities LLC, as representative of the underwriters named therein.

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 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 exercise price per share of Common Stock under this Warrant shall be \$[], subject to adjustment hereunder (the "Exercise Price").
- c) <u>Cashless Exercise</u>. If at the time of exercise hereof there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of the Warrant Shares to the Holder, then this Warrant may also be exercised, in whole or in part, at such 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 Warrant Shares shall take on the registered characteristics of the Warrants being exercised. 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 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.

"<u>Trading Market</u>" 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. <u>Delivery of New Warrants Upon Exercise</u>. 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. <u>Rescission Rights</u>. 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. <u>No Fractional Shares or Scrip</u>. 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. <u>Charges, Taxes and Expenses</u>. 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. <u>Closing of Books</u>. 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 Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the 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) <u>Subsequent Rights Offerings</u>. 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 "<u>Purchase Rights</u>"), 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 completed 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 50% or more of the outstanding Common Stock or 50% or more 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 50% or more of the outstanding shares of Common Stock or 50% or more 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 Weighted Average Price 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) <u>Calculations</u>. 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) <u>Voluntary Adjustment By Company</u>. 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. <u>Adjustment to Exercise Price</u>. 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 Commission 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. 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) <u>Warrant Register</u>. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "<u>Warrant Register</u>"), 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.

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) <u>Saturdays, Sundays, Holidays, etc</u>. 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.

The Company represents, warrants and covenants that, as of the date hereof, (i) the issued and outstanding Common Stock of the Company is registered pursuant to Section 12(b) of the Exchange Act, and listed for trading on the Nasdaq Capital Market; (ii) there is no suit, action, proceeding or investigation pending or, to the knowledge of the Company, threatened against the Company by any Trading Market, or the Commission with respect to any intention by such entity to deregister the Common Stock or prohibit or terminate the listing of the Common Stock on the Nasdaq Capital Market or any other Trading Market; and (iii) the Company has taken no action that is designed to terminate the registration of Common Stock under the Exchange Act.

The Company represents, warrants and covenants that, as of the date hereof, (i) it has not entered into any subscription agreement, side letter or similar agreement or understanding with any investor in connection with such investor's direct or indirect investment in the Company other than the Warrants; and (ii) the other Common Stock purchase warrants issued by the Company pursuant to the Underwriting Agreement and the Registration Statement (a) reflect the same Exercise Price as provided herein, and (b) do not contain, and will not be amended to contain, any terms that are materially more favorable to any such other subscriber thereunder than the terms of this Warrant.

- e) <u>Jurisdiction</u>. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be determined in accordance with the provisions of the Underwriting Agreement.
- f) <u>Restrictions</u>. 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.
- 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 Underwriting 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 5th Avenue, Suite 1400
New York, NY 10017
Attention: Shoshana Shendelman
President and Chief Executive Officer
Email: []

With a copy (for informational purposes only) to:

Skadden, Arps, Slate, Meagher & Flom LLP One Manhattan West New York, NY 10001-8602 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 Commission 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) <u>Limitation of Liability</u>. 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) <u>Remedies</u>. 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) <u>Successors and Assigns</u>. 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) <u>Amendment</u>. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.
- m) <u>Severability</u>. 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) <u>Headings</u>. 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

(the "Company")
ned hereby elects to purchase Warrant Shares of the Company pursuant to the terms of the attached Warrant ers herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.
l take the form of (check applicable box):
wful money of the United States; or mitted the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in on 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the exercise procedure set forth in subsection 2(c).
aid Warrant Shares in the name of the undersigned or in such other name as is specified below:
red to the following DWAC Account Number:
ercise, the undersigned represents and warrants to the Company that in giving effect to the exercise evidenced hereby the n excess of the number of shares of Common Stock permitted to be owned under Section 2(e) of the Warrant to which
of Investing Entity:
pects to name of Holder as specified on the face of the Warrant)
vri s

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:	

COMMON STOCK PURCHASE WARRANT Applied Therapeutics, Inc.

Warrant Shares: Issue Date: June 27, 27 THIS COMMON STOCK PURCHASE WARRANT (the "Warrant") certifies that, for value received, or its assigns "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 hereof (the "Issue Date") and on or prior to 5:00 p.m. (New York City time) on June 27, 2027, (the "Termination Date") but not thereafter, to subscribe and purchase from Applied Therapeutics, Inc., a Delaware corporation (the "Company"), up to shares (as subject to adjustment hereunder "Warrant Shares") of common stock, \$0.0001 par value per share, of the Company ("Common Stock"). The purchase price of one share of Common Studer this Warrant shall be equal to the Exercise Price, as defined in Section 2(b).	Warrant number:	
"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 hereof (the "Issue Date") and on or prior to 5:00 p.m. (New York City time) on June 27, 2027, (the "Termination Date") but not thereafter, to subscribe and purchase from Applied Therapeutics, Inc., a Delaware corporation (the "Company"), up to shares (as subject to adjustment hereunder "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")	Warrant Shares:	Issue Date: June 27, 2022
	"Holder") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any hereof (the "Issue Date") and on or prior to 5:00 p.m. (New York City time) on June 27, 2027, (the "Termination Date") but not and purchase from Applied Therapeutics, Inc., a Delaware corporation (the "Company"), up to shares (as subject to "Warrant Shares") of common stock, \$0.0001 par value per share, of the Company ("Common Stock"). The purchase price of or	y time on or after the date thereafter, to subscribe for adjustment hereunder, the

Section 1. <u>Definitions</u>. Capitalized terms used and not otherwise defined herein shall have the meanings set forth in that certain Underwriting Agreement (the "<u>Underwriting Agreement</u>"), dated June 22, 2022, among the Company and SVB Securities LLC, as representative of the underwriters named therein.

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 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) <u>Exercise Price</u>. The exercise price per share of Common Stock under this Warrant shall be \$0.0001, subject to adjustment hereunder (the "<u>Exercise Price</u>").
- c) <u>Cashless Exercise</u>. If at the time of exercise hereof there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of the Warrant Shares to the Holder, then this Warrant may also be exercised, in whole or in part, at such 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 Warrant Shares shall take on the registered characteristics of the Warrants being exercised. 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 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.

"<u>Trading Market</u>" 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. <u>Delivery of New Warrants Upon Exercise</u>. 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. <u>Rescission Rights</u>. 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. <u>Charges, Taxes and Expenses</u>. 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. <u>Closing of Books</u>. 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 Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the 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) <u>Subsequent Rights Offerings</u>. 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 "<u>Purchase Rights</u>"), 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 completed 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 50% or more of the outstanding Common Stock or 50% or more 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 50% or more of the outstanding shares of Common Stock or 50% or more 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 Weighted Average Price 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) <u>Calculations</u>. 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) <u>Voluntary Adjustment By Company</u>. 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. <u>Adjustment to Exercise Price</u>. 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 Commission 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. 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) <u>Warrant Register</u>. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "<u>Warrant Register</u>"), 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.

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) <u>Saturdays, Sundays, Holidays, etc.</u> 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 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.

The Company represents, warrants and covenants that, as of the date hereof, (i) the issued and outstanding Common Stock of the Company is registered pursuant to Section 12(b) of the Exchange Act, and listed for trading on the Nasdaq Capital Market; (ii) there is no suit, action, proceeding or investigation pending or, to the knowledge of the Company, threatened against the Company by any Trading Market, or the Commission with respect to any intention by such entity to deregister the Common Stock or prohibit or terminate the listing of the Common Stock on the Nasdaq Capital Market or any other Trading Market; and (iii) the Company has taken no action that is designed to terminate the registration of Common Stock under the Exchange Act.

The Company represents, warrants and covenants that, as of the date hereof, (i) it has not entered into any subscription agreement, side letter or similar agreement or understanding with any investor in connection with such investor's direct or indirect investment in the Company other than the Warrants; and (ii) the other Common Stock purchase warrants issued by the Company pursuant to the Underwriting Agreement and the Registration Statement (a) reflect the same Exercise Price as provided herein, and (b) do not contain, and will not be amended to contain, any terms that are materially more favorable to any such other subscriber thereunder than the terms of this Warrant.

- e) <u>Jurisdiction</u>. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be determined in accordance with the provisions of the Underwriting Agreement.
- f) <u>Restrictions</u>. 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.

- 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 Underwriting 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 5th 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

4 Times Square New York, NY 10036

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 Commission 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) <u>Limitation of Liability</u>. 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) <u>Remedies</u>. 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) <u>Successors and Assigns</u>. 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) <u>Amendment</u>. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.
- m) <u>Severability</u>. 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) <u>Headings</u>. 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 abo	ove indicated.
APPLI	ED THERAPEUTICS, INC.
By:	
Na	me: Shoshana Shendelman
Tit	le: 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 War (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.	rant
(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 fort subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to 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:	
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 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 what 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:	<u> </u>
Phone Number: Email Address:	(Please Print)
Dated:, Holder's Signature: Holder's Address:	

COMMON STOCK PURCHASE WARRANT Applied Therapeutics, Inc.

Warrant number:	
Warrant Shares:	Issue Date: June 27, 2022
THIS COMMON STOCK PURCHASE WARRANT (the " <u>Warrant</u> ") certifies that, for value received, " <u>Holder</u> ") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at an hereof (the " <u>Issue Date</u> ") and on or prior to 5:00 p.m. (New York City time) on June 27, 2027, (the " <u>Termination Date</u> ") but no and purchase from Applied Therapeutics, Inc., a Delaware corporation (the " <u>Company</u> "), up to shares (as subject to " <u>Warrant Shares</u> ") of common stock, \$0.0001 par value per share, of the Company (" <u>Common Stock</u> "). The purchase price of counder this Warrant shall be equal to the Exercise Price, as defined in Section 2(b).	ny time on or after the date of thereafter, to subscribe for o adjustment hereunder, the

Section 1. <u>Definitions</u>. Capitalized terms used and not otherwise defined herein shall have the meanings set forth in that certain Underwriting Agreement (the "<u>Underwriting Agreement</u>"), dated June 22, 2022, among the Company and SVB Securities LLC, as representative of the underwriters named therein.

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 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 exercise price per share of Common Stock under this Warrant shall be \$1.00, subject to adjustment hereunder (the "Exercise Price").
- c) <u>Cashless Exercise</u>. If at the time of exercise hereof there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of the Warrant Shares to the Holder, then this Warrant may also be exercised, in whole or in part, at such 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 Warrant Shares shall take on the registered characteristics of the Warrants being exercised. 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 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.

"<u>Trading Market</u>" 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. <u>Delivery of New Warrants Upon Exercise</u>. 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. <u>Rescission Rights</u>. 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. <u>Charges, Taxes and Expenses</u>. 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. <u>Closing of Books</u>. 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 Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the 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) <u>Subsequent Rights Offerings</u>. 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 "<u>Purchase Rights</u>"), 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 completed 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 50% or more of the outstanding Common Stock or 50% or more 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 50% or more of the outstanding shares of Common Stock or 50% or more 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 Weighted Average Price 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) <u>Calculations</u>. 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) <u>Voluntary Adjustment By Company</u>. 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. <u>Adjustment to Exercise Price</u>. 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 Commission 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. 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) <u>Warrant Register</u>. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "<u>Warrant Register</u>"), 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.

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) <u>Saturdays, Sundays, Holidays, etc.</u> 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 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.

The Company represents, warrants and covenants that, as of the date hereof, (i) the issued and outstanding Common Stock of the Company is registered pursuant to Section 12(b) of the Exchange Act, and listed for trading on the Nasdaq Capital Market; (ii) there is no suit, action, proceeding or investigation pending or, to the knowledge of the Company, threatened against the Company by any Trading Market, or the Commission with respect to any intention by such entity to deregister the Common Stock or prohibit or terminate the listing of the Common Stock on the Nasdaq Capital Market or any other Trading Market; and (iii) the Company has taken no action that is designed to terminate the registration of Common Stock under the Exchange Act.

The Company represents, warrants and covenants that, as of the date hereof, (i) it has not entered into any subscription agreement, side letter or similar agreement or understanding with any investor in connection with such investor's direct or indirect investment in the Company other than the Warrants; and (ii) the other Common Stock purchase warrants issued by the Company pursuant to the Underwriting Agreement and the Registration Statement (a) reflect the same Exercise Price as provided herein, and (b) do not contain, and will not be amended to contain, any terms that are materially more favorable to any such other subscriber thereunder than the terms of this Warrant.

- e) <u>Jurisdiction</u>. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be determined in accordance with the provisions of the Underwriting Agreement.
- f) <u>Restrictions</u>. 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.

- 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 Underwriting 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 5th 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

4 Times Square New York, NY 10036

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 Commission 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) <u>Limitation of Liability</u>. 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) <u>Successors and Assigns</u>. 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) <u>Amendment</u>. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.
- m) <u>Severability</u>. 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) <u>Headings</u>. 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 abo	ove indicated.
APPLI	ED THERAPEUTICS, INC.
By:	
Na	me: Shoshana Shendelman
Tit	le: President and Chief Executive Officer

NOTICE OF EXERCISE

TO:	Applied Therapeutics, Inc. (the "Company")
(only it	(1) The undersigned hereby elects to purchase Warrant Shares of the Company pursuant to the terms of the attached Warrant f 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 Wa	arrant Shares shall be delivered to the following DWAC Account Number:
Holder	delivery of this Notice of Exercise, the undersigned represents and warrants to the Company that in giving effect to the exercise evidenced hereby the s 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 tice relates.
[SIGN.	ATURE OF HOLDER]
Signati Name o	of Investing Entity: ure of Authorized Signatory of Investing Entity: of Authorized Signatory: f Authorized Signatory:
(Signat	ture 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:	<u> </u>
Phone Number: Email Address:	(Please Print)
Dated:, Holder's Signature: Holder's Address:	

Skadden, Arps, Slate, Meagher & Flom LLP ONE MANHATTAN WEST NEW YORK, NY 10001

> TEL: (212) 735-3000 FAX: (212) 735-2000 www.skadden.com

FIRM/AFFILIATE **OFFICES** BOSTON **CHICAGO** HOUSTON LOS ANGELES PALO ALTO WASHINGTON, D.C. WILMINGTON **BEIJING BRUSSELS FRANKFURT** HONG KONG LONDON MUNICH **PARIS**

June 27, 2022

SVB Securities LLC 1301 Avenue of the Americas, 12th Floor New York, New York 10019

SÃO PAULO SEOUL SHANGHAI SINGAPORE TOKYO TORONTO

RE: Applied Therapeutics, Inc. – Public Offering of Common Stock and Warrants

Ladies and Gentlemen:

We have acted as special United States counsel to Applied Therapeutics, Inc., a Delaware corporation (the "Company" or "Our Client"), in connection with the Underwriting Agreement, dated June 22, 2022 (the "Underwriting Agreement"), between you (the "Underwriter") and the Company, relating to the sale by the Company to the Underwriter of 20,000,000 shares (the "Shares") of the Company's common stock, par value \$0.0001 per share ("Common Stock"), 10,000,000 pre-funded warrants ("Pre-Funded Warrants") and 30,000,000 accompanying warrants of the Company (together with the Pre-Funded Warrants, the "Warrants"), each Warrant exercisable for the purchase of one share of Common Stock. The Shares and the Warrants are collectively referred to herein as the "Securities." This opinion is being furnished to you pursuant to Section 6(b) of the Underwriting Agreement. Neither the delivery of this opinion nor anything in connection with the preparation, execution or delivery of the Underwriting Agreement or the transactions contemplated thereby is intended to create or shall create an attorney-client relationship with you or any other party except Our Client.

In rendering the opinions stated herein, we have examined and relied upon the following:

(a) the registration statement on Form S-3 (File No. 333-238948) of the Company relating to the equity securities and other securities of the Company filed with the Securities and Exchange Commission (the "Commission") on June 5, 2020 under the Securities Act of 1933 (the "Securities Act") and Pre-Effective Amendment No. 1 thereto allowing for delayed offerings pursuant to Rule 415 of the General Rules and Regulations under the Securities Act (the "Rules and Regulations"), including information deemed to be a part of the registration statement pursuant to Rule 430B of the Rules and Regulations and the Notice of Effectiveness of the Commission posted on its website declaring such registration statement effective on June 15, 2020 (such registration statement being hereinafter referred to as the "Registration Statement");

- (b) the prospectus, dated June 15, 2020, (the "Base Prospectus") which forms a part of and is included in the Registration Statement;
- (c) the preliminary prospectus supplement, dated June 22, 2022 (together with the Base Prospectus, the "<u>Preliminary Prospectus</u>"), relating to the offering of the Securities, in the form filed with the Commission pursuant to Rule 424(b) of the Rules and Regulations;
- (d) the prospectus supplement, dated June 22, 2022 (together with the Base Prospectus, the "<u>Prospectus</u>"), relating to the offering of the Securities, in the form filed with the Commission pursuant to Rule 424(b) of the Rules and Regulations;
 - (e) an executed copy of the Underwriting Agreement;
 - (f) the Warrants executed by the Company and in the form attached as Exhibit B to the Underwriting Agreement;
- (g) an executed copy of a certificate of Chids Mahadevan, Senior Vice President of Finance and Interim Principal Financial Officer of the Company, dated the date hereof, a copy of which is attached as <u>Exhibit A</u> hereto (the "<u>Officer's Certificate</u>");
 - (h) an executed copy of a certificate of Shoshana Shendelman, Secretary of the Company, dated the date hereof (the "Secretary's Certificate");
- (i) a copy of the Company's Amended and Restated Articles of Incorporation (the "Articles of Incorporation"), certified by the Secretary of State of the State of Delaware as of June 21, 2022, and certified pursuant to the Secretary's Certificate;
- (j) a copy of the Company's Amended and Restated Bylaws (the "Bylaws"), as amended and in effect as of the date hereof, certified pursuant to the Secretary's Certificate;
- (k) a copy of a written consent of the Board of Directors of the Company, adopted on June 21, 2022, and certain resolutions of the Pricing Committee thereof, adopted on June 22, 2022, certified pursuant to the Secretary's Certificate;
- (l) a copy of a certificate, dated June 22, 2022, and a bringdown verification thereof, dated the date hereof, from the Secretary of State of the State of Delaware with respect to the Company's existence and good standing in the State of Delaware (the "Delaware Certificate"); and
 - (m) copies of the Scheduled Contracts (as defined below).

We have also examined originals or copies, certified or otherwise identified to our satisfaction, of such records of the Company and such agreements, certificates and receipts of public officials, certificates of officers or other representatives of the Company and others, and such other documents as we have deemed necessary or appropriate as a basis for the opinions stated below.

In our examination, we have assumed the genuineness of all signatures, including electronic signatures, the legal capacity and competency of all natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as facsimile, electronic, certified or photocopied copies, and the authenticity of the originals of such copies. As to any facts relevant to the opinions stated herein that we did not independently establish or verify, we have relied upon statements and representations of officers and other representatives of the Company and others and of public officials, including the facts and conclusions set forth in the Officer's Certificate and the Secretary's Certificate and the factual representations and warranties contained in the Underwriting Agreement.

We do not express any opinion with respect to the laws of any jurisdiction other than (i) the laws of the State of New York, (ii) the federal laws of the United States of America and (iii) the General Corporation Law of the State of Delaware (the "<u>DGCL</u>").

The Underwriting Agreement and the Warrants are referred to herein collectively as the "<u>Transaction Documents</u>." As used herein, (a) "<u>Organizational Documents</u>" means those documents listed in paragraphs (i) and (j) above, (b) "<u>Scheduled Contracts</u>" means those agreements described on <u>Schedule I</u> hereto, (c) "<u>Scheduled Orders</u>" means the orders or decrees described on <u>Schedule II</u> hereto, and (d) "<u>Disclosure Package</u>" means the Preliminary Prospectus as amended and supplemented by the pricing information set forth on <u>Schedule III</u> to the Underwriting Agreement.

Based upon the foregoing and subject to the qualifications and assumptions stated herein, we are of the opinion that:

- 1. Based solely on our review of the Delaware Certificate, the Company is duly incorporated and is validly existing and in good standing under the DGCL.
- 2. The Company has the corporate power and authority to execute and deliver the Underwriting Agreement and to consummate the issuance and sale of the Securities contemplated thereby under the DGCL.
- 3. The Underwriting Agreement has been duly authorized, executed and delivered by all requisite corporate action on the part of the Company under the DGCL.
- 4. Neither the execution and delivery by the Company of the Underwriting Agreement nor the consummation by the Company of the issuance and sale of the Securities contemplated thereby: (i) conflicts with the Organizational Documents; (ii) constitutes a violation of, or a default under, any Scheduled Contract; (iii) contravenes any Scheduled Order or (iv) violates any law, rule or regulation of the State of New York or the United States of America or the DGCL, as applicable.
- 5. Neither the execution and delivery by the Company of the Underwriting Agreement nor the consummation by the Company of the issuance and sale of the Securities contemplated thereby requires the consent, approval, licensing or authorization of, or any filing, recording or registration with, any governmental authority under any law, rule or regulation of the State of New York, the DGCL or the United States of America except for those consents, approvals, licenses and authorizations already obtained and those filings, recordings and registrations already made.
- 6. The Company is not and, solely after giving effect to the offering and sale of the Securities and the application of the proceeds thereof as described in the Prospectus, will not be an "investment company" as such term is defined in the Investment Company Act of 1940.

- 7. The Shares have been duly authorized by all requisite corporate action on the part of the Company under the DGCL and, when the Shares are delivered to and paid for by the Underwriter in accordance with the terms of the Underwriting Agreement, the Shares will be validly issued, fully paid and nonassessable and free and clear of any preemptive rights or any similar rights arising under the DGCL or the Organizational Documents or any Scheduled Contract.
- 8. The Company has authority to issue 100,000,000 shares of Common Stock, par value \$0.0001 per share, and such authorized capital stock of the Company conforms as to legal matters to the description thereof contained under the caption "Description of Capital Stock" in the Preliminary Prospectus, the Prospectus and the Disclosure Package.
- 9. The Warrants have been duly authorized by all requisite corporate action on the part of the Company under the DGCL and, when the Warrants are delivered and paid for in accordance with the terms of the Underwriting Agreement, will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms under the laws of the State of New York.
- 10. The 30,000,000 shares of Common Stock initially issuable upon exercise of the Warrants (the "Warrant Shares") have been duly authorized by all requisite corporate action on the part of the Company under the DGCL and, when issued and delivered upon due exercise of the Warrants against payment therefor in accordance with the provisions of the Warrants, will be validly issued, fully paid and nonassessable and free and clear of any preemptive rights or any similar rights arising under the DGCL, the Organizational Documents or any Scheduled Contract. The resolutions of the Board of Directors of the Company approving the issuance of the Warrants state that they have reserved the Warrant Shares for issuance.
- 11. The statements in the Prospectus and the Disclosure Package in paragraphs two, four, five, eight, nine, ten and eleven under the caption "Underwriting," insofar as such statements purport to summarize certain provisions of the Underwriting Agreement, fairly summarize such provisions in all material respects.
- 12. The statements in the Prospectus and the Disclosure Package under the caption "Description of Capital Stock," insofar as such statements purport to summarize certain provisions of the Organizational Documents, fairly summarize such provisions in all material respects.
- 13. The statements in the Prospectus and the Disclosure Package under the caption "Description of Warrants," insofar as such statements purport to summarize certain provisions of the Warrants, fairly summarize such provisions in all material respects.

The opinions stated herein are subject to the following qualifications:

- (a) we do not express any opinion with respect to the effect on the opinions stated herein of any bankruptcy, insolvency, reorganization, moratorium, fraudulent transfer, preference and other similar laws affecting creditors' rights generally, and the opinions stated herein are limited by such laws and by general principles of equity (regardless of whether enforcement is sought in equity or at law);
- (b) except to the extent expressly stated in the opinions contained herein, we do not express any opinion with respect to the effect on the opinions stated herein of (i) the compliance or non-compliance of any party to the Transaction Document with any laws, rules or regulations applicable to such party or (ii) the legal status or legal capacity of any party to the Transaction Document;

- (c) we do not express any opinion with respect to any law, rule or regulation that is applicable to any party to the Transaction Documents or the transactions contemplated thereby solely because such law, rule or regulation is part of a regulatory regime applicable to any such party or any of its affiliates as a result of the specific assets or business operations of such party or such affiliates;
- (d) except to the extent expressly stated in paragraph 6, we do not express any opinion with respect to any securities, antifraud, consumer credit, debt collection, privacy, derivatives or commodities laws, rules or regulations, Regulations T, U or X of the Board of Governors of the Federal Reserve System or laws, rules or regulations relating to national security;
- (e) except to the extent expressly stated in the opinions contained herein, we have assumed that each of the Transaction Documents constitutes the valid and binding obligation of each party to such Transaction Document, enforceable against such party in accordance with its terms;
- (f) we do not express any opinion whether the execution or delivery of any Transaction Document by the Company, or the performance by the Company of its obligations under any Transaction Documents, including the sale of the Securities, will constitute a violation of, or a default under, any covenant, restriction or provision with respect to financial ratios or tests or any aspect of the financial condition or results of operations of the Company;
- (g) we do not express any opinion with respect to the enforceability of any provision contained in any Transaction Document relating to any indemnification, contribution, non-reliance, exculpation, release, limitation or exclusion of remedies, waiver or other provisions having similar effect that may be contrary to public policy or violative of federal or state securities laws, rules or regulations, or to the extent any such provision purports to, or has the effect of, waiving or altering any statute of limitations;
- (h) to the extent that any opinion relates to the enforceability of the choice of New York law and choice of New York forum provisions contained in any Transaction Document, the opinions stated herein are subject to the qualification that such enforceability may be subject to, in each case, (i) the exceptions and limitations in New York General Obligations Law sections 5-1401 and 5-1402 and (ii) principles of comity and constitutionality;
- (i) we call to your attention that irrespective of the agreement of the parties to any Transaction Document, a court may decline to hear a case on grounds of forum non conveniens or other doctrine limiting the availability of such court as a forum for resolution of disputes; in addition, we call to your attention that we do not express any opinion with respect to the subject matter jurisdiction of the federal courts of the United States of America in any action arising out of or relating to any Transaction Document;
- (j) in rendering the opinion set forth in paragraph 10 above, we have assumed that the exercise price of such Warrants will be at least equal to the par value of the shares of Common Stock issuable upon exercise of such Warrants at the time of exercise;
- (k) we have assumed that the issuance of the Securities and the Warrant Shares does not violate or conflict with any agreement or instrument binding on the Company (except that we do not make this assumption with respect to the Articles of Incorporation, the Bylaws or the Scheduled Contracts); and

(l) the opinions stated herein are limited to the agreements and documents specifically identified in the opinions contained herein without regard to any agreement or other document referenced in such agreement (including agreements or other documents incorporated by reference or attached or annexed thereto).

In addition, in rendering the foregoing opinions we have assumed that:

- (a) except to the extent expressly stated in the opinions contained herein with respect to the Company, neither the execution and delivery by the Company of the Transaction Documents nor the performance by the Company of its obligations under each of the Transaction Documents: (i) constitutes or will constitute a violation of, or a default under, any lease, indenture, agreement or other instrument to which the Company or its property is subject, (ii) contravenes or will contravene any order or decree of any governmental authority to which the Company or its property is subject, or (iii) violates or will violate any law, rule or regulation to which the Company or its property is subject; and
- (b) except to the extent expressly stated in the opinions contained herein with respect to the Company, neither the execution and delivery by the Company of the Transaction Documents nor the enforceability of each of the Transaction Documents against the Company requires or will require the consent, approval, licensing or authorization of, or any filing, recording or registration with, any governmental authority under any law, rule or regulation of any jurisdiction.

This opinion is being furnished only to you as the Underwriter and is solely for your benefit in connection with the closing occurring today and the offering of the Securities, in each case pursuant to the Underwriting Agreement. Without our prior written consent, this opinion may not be used, circulated, quoted or otherwise referred to for any other purpose or relied upon by, or assigned to, any other person or entity for any purpose, including any other person or entity that acquires any Securities or shares of Common Stock issuable upon exercise of any Warrants or that seeks to assert the rights of an Underwriter in respect of this opinion (other than an Underwriter's successor in interest by means of merger, consolidation, transfer of a business or other similar transaction).

Very truly yours,

/s/ Skadden, Arps, Slate, Meagher & Flom

ALN

Schedule I

Scheduled Contracts

- 1. Registration Rights Agreement, dated November 7, 2019, by and among the Company and the Purchasers.
- 2. Securities Purchase Agreement, dated November 7, 2019, by and among the Company and the Purchasers.
- 3. Amended and Restated Investors' Rights Agreement, by and among the Registrant and certain of its stockholders, dated November 5, 2018.
- 4. Form of Warrant, issued to affiliates of Brookline Capital Markets, a division of CIM Securities, LLC, on March 13, 2017.
- 5. Form of Warrant, issued to affiliates of Brookline Capital Markets, a division of CIM Securities, LLC, on November 5, 2018.
- 6. Form of Warrant, issued to affiliates of Brookline Capital Markets, a division of CIM Securities, LLC, on April 9, 2019.
- 7. Exclusive License Agreement by and between the Registrant and The Trustees of Columbia University in the City of New York, dated October 26, 2016

Schedule II

Scheduled Orders

N	one	

ExhibitA

Officer's Certificate

Officer's Certificate

June 27, 2022

I, Chids Mahadevan, am the duly elected, qualified and acting Senior Vice President of Finance of Applied Therapeutics, Inc., a Delaware company (the "Company"). I understand that pursuant to Section 6(b) of the Underwriting Agreement (the "Underwriting Agreement") dated June 22, 2022, between the Company and SVB Securities LLC (the "Underwriter"), Skadden, Arps, Slate, Meagher & Flom LLP ("SASM&F") is rendering an opinion as of the date hereof (the "Opinion") to the Underwriter with respect to the Underwriting Agreement. I further understand that SASM&F is relying on this Officer's Certificate and the statements made herein in rendering such Opinion.

With regard to the foregoing, on behalf of the Company, I hereby certify that:

- 1. I am familiar with the business of the Company and its subsidiaries, and due inquiry has been made of all persons deemed necessary or appropriate to verify or confirm the statements contained herein.
- 2. SASM&F may rely on the respective representations and warranties that the Company has made in the Underwriting Agreement and each of the certificates delivered pursuant thereto. I have made a careful review of each of such representations and warranties and hereby confirm, to the best of my knowledge and belief, that such representations and warranties are true, correct and complete on and as of the date of this Officer's Certificate.
- 3. Copies of the agreements or instruments listed on Schedule I to the Opinion have been delivered to SASM&F and such copies are true and correct copies of such agreements and instruments, and such agreements and instruments have not been amended, modified or supplemented except as identified on such Schedule I.
- 4. None of the assets of the Company and its subsidiaries on a consolidated basis and on an unconsolidated basis consist of Margin Stock.
- 5. The Company is primarily engaged directly in the business of developing novel product candidates against validated molecular targets in indication of high unmet need; and the Company has not and is not engaged in, and does not propose to engage in, the business of issuing Face-Amount Certificates of the Installment Type and has no such certificate outstanding.
- 6. The Company's Research and Development Expenses, for the last four fiscal quarters combined, are a substantial percentage of its total expenses for the same period.
- 7. The Company's net income derived from Investments in Securities, for the last four fiscal quarters combined, does not exceed twice the amount of its Research and Development Expenses for the same period.
- 8. The Company's expenses for investment advisory and management activities, investment research and custody, for the last four fiscal quarters combined, do not exceed five percent (5%) of its total expenses for the same period.

- 9. The Company's Investments in Securities are Capital Preservation Investments.
- 10. The Company's Board of Directors has adopted a written investment policy with respect to the Company's Capital Preservation Investments.
- 11. The Company does not hold itself out as being engaged in the business of investing, reinvesting or trading in Securities, and it is not a special situation investment company.
- 12. The Company is primarily engaged directly in a business or businesses other than that of investing, reinvesting, owning, holding, or trading in Securities, as evidenced by:
 - (a) The activities of its officers, directors and employees;
 - (b) Its public representations of policies;
 - (c) Its historical development; and
 - (d) An appropriate resolution of its Board of Directors, which resolution or action has been recorded contemporaneously in its minute books or comparable documents.
 - 13. As used in <u>paragraph 4</u> of this Officer's Certificate, the following term shall have the following meaning:

"Margin Stock" means: (i) any equity security registered or having unlisted trading privileges on a national securities exchange; (ii) any OTC security designated as qualified for trading in the National Market System under a designation plan approved by the Securities and Exchange Commission; (iii) any debt security convertible into a margin stock or carrying a warrant or right to subscribe to or purchase a margin stock; (iv) any warrant or right to subscribe to or purchase a margin stock; or (v) any security issued by an investment company registered under Section 8 of the Investment Company Act of 1940.

14. As used in <u>paragraphs 5</u> through <u>12</u> and in <u>paragraph 14</u> of this Officer's Certificate, the following terms shall have the following meanings:

All assets shall be valued in accordance with Section 2(a)(41)(A) of the Act:

"Act" means the Investment Company Act of 1940.

"Board of Directors" means the Company's board of directors or an appropriate person or persons performing similar functions for any company not having a board of directors.

"Capital Preservation Investment" means an investment that is made to conserve capital and liquidity until the funds are used in the Company's primary business or businesses.

"controlled primarily" means legal entities in which the Company owns more than 25% of the Voting Securities and owns more Voting Securities than any other person.

"Face-Amount Certificate of the Installment Type" means any certificate, investment contract, or other Security that represents an obligation on the part of its issuer to pay a stated or determinable sum or sums at a fixed or determinable date or dates more than 24 months after the date of issuance, in consideration of the payment of periodic installments of a stated or determinable amount.

"investments made pursuant to a collaborative research and development arrangement" means an investment in an investee made pursuant to a business relationship which:

- (a) is designed to achieve narrowly focused goals that are directly related to, and an integral part of, the Company's research and development activities;
- (b) calls for the Company to conduct joint research and development activities with the investee or a company controlled primarily by, or which controls primarily, the investee; and
 - (c) is not entered into for the purpose of avoiding regulation under the Act.

"Investments in Securities" means all Securities other than securities issued by Majority-Owned Subsidiaries and legal entities controlled primarily by the Company that conduct similar types of businesses, through which the issuer is engaged primarily in a business other than that of investing, reinvesting, owning, holding or trading in securities.

"Majority-Owned Subsidiary" means a legal entity in which the Company owns 50% or more of the Voting Securities issued by the legal entity.

"Other Investment" means an Investment in Securities that is not a Capital Preservation Investment.

"Research and Development Expenses" means research and development expenses as defined in FASB Statement of Financial Accounting Standards No. 2, Accounting for Research and Development Costs, as currently in effect or as it may be subsequently revised.

"Security" means any note, stock, treasury stock, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral-trust certificate, preorganization certificate or subscription, transferable share, investment contract, voting-trust certificate, certificate of deposit for a security, fractional undivided interest in oil, gas, or other mineral rights, any put, call, straddle, option, or privilege on any security (including a certificate of deposit) or on any group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or, in general, any interest or instrument commonly known as a "security," or any certificate of interest or participation in, temporary or interim certificate for, receipt for, guarantee of, or warrant or right to subscribe to or purchase, any of the foregoing.

"<u>Voting Security</u>" means any security presently entitling the owner or holder thereof to vote for the election of directors of a company (or its equivalent, e.g., general partner or manager of a limited liability company).

IN WITNESS WHEREOF, I, the undersigned, have duly executed this Officer's Certificate as of the date first written above.

APPLIED THERAPEUTICS, INC.

By: /s/ Chids Mahadevan

Name: Chids Mahadevan

Title: Senior Vice President of Finance

Skadden, Arps, Slate, Meagher & Flom LLP ONE MANHATTAN WEST NEW YORK, NY 10001

> TEL: (212) 735-3000 FAX: (212) 735-2000 www.skadden.com

FIRM/AFFILIATE
OFFICES
BOSTON
CHICAGO
HOUSTON
LOS ANGELES
PALO ALTO
WASHINGTON, D.C.
WILMINGTON

BEIJING BRUSSELS FRANKFURT HONG KONG LONDON MUNICH PARIS SÃO PAULO SEOUL SHANGHAI SINGAPORE TOKYO

TORONTO

June 27, 2022

Applied Therapeutics, Inc. 545 Fifth Avenue, Suite 1400 New York, NY 10017

Re: Applied Therapeutics, Inc.

Public Offering of Common Stock and Warrants

Ladies and Gentlemen:

We have acted as special United States counsel to Applied Therapeutics, Inc., a Delaware corporation (the "Company"), in connection with the public offering by the Company of 20,000,000 shares ("Shares") of common stock, par value \$0.0001 per share ("Common Stock"), 10,000,000 pre-funded warrants ("Pre-Funded Warrants") and 30,000,000 accompanying warrants of the Company (together with the Pre-Funded Warrants, the "Warrants"), each Warrant exercisable for the purchase of one share of Common Stock. The Shares and the Warrants are collectively referred to herein as the "Securities."

This opinion is being furnished in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act of 1933 (the "Securities Act").

In rendering the opinions stated herein, we have examined and relied upon the following:

(a) the registration statement on Form S-3 (File No. 333-238948) of the Company, relating to Common Stock and other securities of the Company, filed with the Securities and Exchange Commission (the "Commission") on June 5, 2020 under the Securities Act allowing for delayed offerings pursuant to Rule 415 of the General Rules and Regulations under the Securities Act (the "Rules and Regulations"), including the information deemed to be part of the registration statement pursuant to Rule 430B of the Rules and Regulations and the Notice of Effectiveness of the Commission posted on its website declaring such registration statement effective on June 15, 2020 (such registration statement being hereinafter referred to as the "Registration Statement");

- (b) the prospectus, dated June 15, 2020 (the "Base Prospectus"), which forms a part of and is included in the Registration Statement;
- (c) the preliminary prospectus supplement, dated June 22, 2022 (together with the Base Prospectus, the "Preliminary Prospectus") relating to the offering of the Securities, in the form filed with the Commission pursuant to Rule 424(b) of the Rules and Regulations;
- (d) the prospectus supplement, dated June 22, 2022 (together with the Base Prospectus, the "Prospectus"), relating to the offering of the Securities, in the form filed with the Commission pursuant to Rule 424(b) of the Rules and Regulations;
- (e) the underwriting agreement, dated June 22, 2022 (the "Underwriting Agreement"), between the Company and SVB Securities LLC (the "Underwriter"), relating to the sale by the Company to the Underwriter of the Securities;
 - (f) the Warrants executed by the Company and in the form attached as Exhibit B to the Underwriting Agreement;
- (g) an executed copy of a certificate of Shoshana Shendelman, Secretary of the Company, dated the date hereof (the Secretary's Certificate'');
- (h) a copy of the Company's Amended and Restated Certificate of Incorporation (the "Amended and Restated Certificate of Incorporation"), certified by the Secretary of State of the State of Delaware as of June 21, 2022, and certified pursuant to the Secretary's Certificate;
- (i) a copy of the Company's Amended and Restated Bylaws, as amended and in effect as of the date hereof (the "Amended and Restated Bylaws"), certified pursuant to the Secretary's Certificate; and
- (j) a copy of a written consent of the Board of Directors of the Company, adopted on June 21, 2022 and certain resolutions of the Pricing Committee, adopted on June 22, 2022, certified pursuant to the Secretary's Certificate. We have also examined originals or copies, certified or otherwise identified to our satisfaction, of such records of the Company and such agreements, certificates and receipts of public officials, certificates of officers or other representatives of the Company and others, and such other documents as we have deemed necessary or appropriate as a basis for the opinions stated below, including the facts and conclusions set forth in the Secretary's Certificate and the factual representations and warranties contained in the Underwriting Agreement.

In our examination, we have assumed the genuineness of all signatures, including electronic signatures, the legal capacity and competency of all natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as facsimile, electronic, certified or photocopied copies, and the authenticity of the originals of such copies. With respect to our opinion set forth below, we have assumed that the issuance of the Shares and the shares of Common Stock issuable on exercise of the Warrants will not violate or conflict with any agreement or instrument binding on the Company (except that we do not make this assumption with respect to the Amended and Certificate of Incorporation, the Amended and Restated Bylaws or those agreements or instruments expressed to be governed by the laws of the State of New York which are listed in Part II of the Registration Statement or the Company's Annual Report on Form 10-K for the year ended December 31, 2021). As to any facts relevant to the opinions stated herein that we did not independently establish or verify, we have relied upon statements and representations of officers and other representatives of the Company and others and of public officials, including the factual representations and warranties set forth in the Underwriting Agreement.

We do not express any opinion with respect to the laws of any jurisdiction other than (i) the laws, of the State of New York and (ii) the General Corporation Law of the State of Delaware (the "DGCL") (all of the foregoing being referred to as "Opined-on-Law").

As used herein "Transaction Documents" means the Underwriting Agreement and the Warrants.

Based upon the foregoing and subject to the qualifications and assumptions stated herein, we are of the opinion that:

- 1. The Shares have been duly authorized by all requisite corporate action on the part of the Company under the DGCL and, when issued and sold in accordance with the Underwriting Agreement, will be validly issued, fully paid and nonassessable.
- 2. The 30,000,000 shares of Common Stock issuable upon exercise of the Warrants have been duly authorized by all requisite corporate action on the part of the Company under the DGCL, and, when issued and delivered upon due exercise of the Warrants against payment therefor in accordance with the provisions of the Warrants, will be validly issued, fully paid and nonassessable.
- 3. The Warrants have been duly authorized by all requisite corporate action on the part of the Company under the DGCL and, when the Warrants are delivered and paid for in accordance with the terms of the Underwriting Agreement, will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms under the laws of the State of New York.

The opinions stated herein are subject to the following qualifications:

(a) we do not express any opinion with respect to the effect on the opinions stated herein of any bankruptcy, insolvency, reorganization, moratorium, fraudulent transfer, preference and other similar laws or governmental orders affecting creditors' rights generally, and the opinions stated herein are limited by such laws and orders and by general principles of equity (regardless of whether enforcement is sought in equity or at law);

- (b) we do not express any opinion with respect to any law, rule or regulation that is applicable to any party to any of the Transaction Documents or the transactions contemplated thereby solely because such law, rule or regulation is part of a regulatory regime applicable to any such party or any of its affiliates as a result of the specific assets or business operations of such party or such affiliates;
- (c) except to the extent expressly stated in the opinions contained herein, we have assumed that each of the Transaction Documents constitutes the valid and binding obligation of each party to such Transaction Document, enforceable against such party in accordance with its terms;
- (d) we do not express any opinion with respect to the enforceability of any provision contained in any Transaction Document relating to any indemnification, contribution, non-reliance, exculpation, release, limitation or exclusion of remedies, waiver or other provisions having similar effect that may be contrary to public policy or violative of federal or state securities laws, rules or regulations, or to the extent any such provision purports to, or has the effect of, waiving or altering any statute of limitations;
- (e) to the extent that any opinion relates to the enforceability of the choice of New York law and choice of New York forum provisions contained in any Transaction Document, the opinions stated herein are subject to the qualification that such enforceability may be subject to, in each case, (i) the exceptions and limitations in New York General Obligations Law sections 5-1401 and 5-1402 and (ii) principles of comity and constitutionality.

In addition, in rendering the foregoing opinions we have assumed that, at all applicable times:

- (a) neither the execution and delivery by the Company of the Transaction Documents nor the performance by the Company of its obligations thereunder, including the issuance and sale of the Warrants: (i) constituted or will constitute a violation of, or a default under, any lease, indenture, instrument or other agreement to which the Company or its property is subject (except that we do not make the assumption set forth in this clause (i) with respect to those agreements or instruments expressed to be governed by the laws of the State of New York which are listed in Part II of the Registration Statement or the Company's Annual Report on Form 10-K for the year ended December 31, 2021), (ii) contravened or will contravene any order or decree of any governmental authority to which the Company or its property is subject, or (iv) violated or will violate any law, rule or regulation to which the Company or its property is subject (except that we do not make the assumption set forth in this clause (iii) with respect to the Opined-on Law); and
- (b) neither the execution and delivery by the Company of the Transaction Documents nor the performance by the Company of its obligations thereunder, including the issuance and sale of the Warrants, required or will require the consent, approval, licensing or authorization of, or any filing, recording or registration with, any governmental authority under any law, rule or regulation of any jurisdiction.

We hereby consent to the reference to our firm under the heading "Legal Matters" in the Preliminary Prospectus and the Prospectus. We
also hereby consent to the filing of this opinion with the Commission as an exhibit to the Company's Current Report on Form 8-K filed on the date hereof
and incorporated by reference into the Registration Statement. In giving this consent, we do not thereby admit that we are within the category of persons
whose consent is required under Section 7 of the Securities Act or the Rules and Regulations.

Very truly yours,

/s/ Skadden, Arps, Slate, Meagher & Flom

ALN