

**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) May 25, 2023

TSCAN THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-40603
(Commission
File Number)

82-5282075
(I.R.S. Employer
Identification No.)

830 Winter Street,
Waltham, Massachusetts
(Address of principal executive offices)

02451
(Zip Code)

Registrant's telephone number, including area code (857) 399-9500

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

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

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

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

Title of each class	Trade Symbol(s)	Name of each exchange on which registered
Voting Common Stock, \$0.0001 par value per share	TCRX	The Nasdaq Global Market LLC

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

Emerging growth company

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

Item 1.01. Entry into a Material Definitive Agreement

On May 25, 2023, TScan Therapeutics, Inc. (the “**Company**”) entered into an underwriting agreement (the “**Underwriting Agreement**”) with Morgan Stanley & Co. LLC and Wedbush Securities Inc., as representatives (the “**Representatives**”) of the underwriters named therein (the “**Underwriters**”), pursuant to which the Company agreed to issue and sell an aggregate of (a) 22,989,474 shares (the “**Firm Shares**”) of its voting common stock, par value \$0.0001 per share (the “**Voting Common Stock**”), at a price to the public of \$2.00 per share, and (b) pre-funded warrants to purchase up to 47,010,526 shares of the Company’s Voting Common Stock (the “**Pre-Funded Warrants**”), at a price to the public of \$1.9999 per warrant with an exercise price of \$0.0001 per share (the “**Offering**”). Pursuant to the Underwriting Agreement, the Underwriters subsequently exercised their option thereunder to purchase an additional 297,660 shares of Voting Common Stock (the “**Optional Shares**,” and together with the Firm Shares, the “**Shares**”). The Underwriting Agreement contains customary representations and warranties, conditions to closing, market standoff provisions, termination provisions and indemnification obligations, including for liabilities under the Securities Act of 1933, as amended (the “**Securities Act**”). The Offering was made pursuant to the shelf registration statement on Form S-3 (File No. 333-268260) that was filed by TScan with the Securities and Exchange Commission (“**SEC**”) on November 9, 2022, and declared effective by the SEC on May 16, 2023, and a related prospectus supplement.

The Company estimates that the net proceeds of this offering, after deducting underwriting discounts and commissions and estimated offering expenses, will be approximately \$134.7 million, and the Company does not expect any additional exercise of the option to purchase additional shares by the Underwriters. The Company will receive nominal proceeds, if any, from the exercise of the pre-funded warrants. The Company intends to use the net proceeds from the Offering for general corporate purposes. The Company expects the Offering to close on May 31, 2023 for the voting common stock, and June 1, 2023 for the pre-funded warrants; in each case, settlement is subject to the satisfaction of customary closing conditions.

The Underwriting Agreement is filed as Exhibit 1.1 to this Current Report on Form 8-K and is incorporated herein by reference, and the foregoing description of the terms of the Underwriting Agreement is qualified in its entirety by reference to such exhibit. The form of Pre-Funded Warrant to Purchase Common Stock is filed as Exhibit 4.1 to this Current Report on Form 8-K and is incorporated herein by reference, and the foregoing description of the terms of the Pre-Funded Warrants is qualified in its entirety by reference to such exhibit. A copy of the opinion of Goodwin Procter LLP, relating to the validity of the Shares and the Pre-Funded Warrants in connection with the Offering, is filed as Exhibit 5.1 to this Current Report on Form 8-K.

Item 8.01. Other Events.

On May 25, 2023, and May 26, 2023, the Company issued press releases announcing the launch and the pricing of the Offering, respectively. Copies of the press releases are filed as Exhibits 99.1 and 99.2, respectively, to this Current Report on Form 8-K and are incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits

(d) Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
1.1	Underwriting Agreement dated May 25, 2023.
4.1	Form of Pre-Funded Warrant.
5.1	Opinion of Goodwin Procter LLP.
23.1	Consent of Goodwin Procter LLP (contained in Exhibit 5.1).
99.1	Launch Press Release dated May 25, 2023.
99.2	Pricing Press Release dated May 26, 2023.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

SIGNATURE

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

TScan Therapeutics, Inc.

Date: May 31, 2023

By: /s/ Brian Silver
Brian Silver
Chief Financial Officer

22,989,474 SHARES OF COMMON STOCK (PAR VALUE \$0.0001 PER SHARE)

PRE-FUNDED WARRANTS TO PURCHASE 47,010,526 SHARES OF COMMON STOCK

TScan Therapeutics, Inc.

UNDERWRITING AGREEMENT

May 25, 2023

Morgan Stanley & Co. LLC
Wedbush Securities Inc.
as Representatives of the several Underwriters listed in Schedule II hereto

c/o Morgan Stanley & Co. LLC
1585 Broadway
New York, New York 10036

c/o Wedbush Securities Inc.
1000 Wilshire Boulevard
Los Angeles, CA 90017

Ladies and Gentlemen:

TScan Therapeutics, Inc., a Delaware corporation (the “**Company**”), proposes to issue and sell to the several Underwriters named in Schedule II hereto (the “**Underwriters**”) an aggregate of (a) 22,989,474 shares of its voting common stock (the “**Firm Shares**”), par value \$0.0001 per share (the “**Common Stock**”), and (b) pre-funded warrants to purchase up to 47,010,526 shares of the Company’s Common Stock in a form to be mutually agreed upon by the Company and the Representatives (the “**Pre-Funded Warrants**”) and, together with the Firm Shares, the “**Firm Securities**”) at an exercise price of \$0.0001.

The Company also proposes to issue and sell to the several Underwriters not more than the number of additional shares of Common Stock (par value \$0.0001 per share) set forth in Schedule I hereto (the “**Additional Shares**”) if and to the extent that Morgan Stanley & Co. LLC and Wedbush Securities Inc., as representatives of the offering (the “**Representatives**”), shall have determined to exercise, on behalf of the Underwriters, the right to purchase such shares of Common Stock granted to the Underwriters in Section 2 hereof. The Firm Shares and the Additional Shares are hereinafter collectively referred to as the “**Shares**” and, together with the Pre-Funded Warrants, the “**Securities**.” The shares of the Company’s Common Stock issuable upon exercise of the Pre-Funded Warrants are herein referred to as the “**Warrant Shares**.”

The Company has filed with the Securities and Exchange Commission (the “**Commission**”) a registration statement on Form S-3 (File No. 333-268260), including a prospectus, relating to the securities (the “**Shelf Securities**”), including the Securities, to be issued from time to time by the Company. The registration statement as amended to the date of this Agreement, including the information (if any) deemed to be part of the registration statement at the time of effectiveness pursuant to Rule 430A or Rule 430B under the Securities Act of 1933, as amended (the “**Securities Act**”), is hereinafter referred to as the “**Registration Statement**”, and the related prospectus covering the

Shelf Securities dated May 16, 2023 in the form first used to confirm sales of the Securities (or in the form first made available to the Underwriters by the Company to meet requests of purchasers pursuant to Rule 173 under the Securities Act) is hereinafter referred to as the “**Basic Prospectus**.” The Basic Prospectus, as supplemented by the prospectus supplement specifically relating to the Securities in the form first used to confirm sales of the Securities (or in the form first made available to the Underwriters by the Company to meet requests of purchasers pursuant to Rule 173 under the Securities Act) is hereinafter referred to as the “**Prospectus**,” and the term “**preliminary prospectus**” means any preliminary form of the Prospectus. For purposes of this Agreement, “**free writing prospectus**” has the meaning set forth in Rule 405 under the Securities Act, “**Time of Sale Prospectus**” means the documents and pricing information set forth opposite the caption “Time of Sale Prospectus” in Schedule I hereto, and “**broadly available road show**” means a “bona fide electronic road show” as defined in Rule 433(h)(5) under the Securities Act that has been made available without restriction to any person. For purposes of this Agreement, (a) except where otherwise expressly provided, the term “affiliate” has the meaning set forth in Rule 405 under the Securities Act; (b) the term “business day” means any day other than a day on which banks are permitted or required to be closed in New York City; and (c) the term “subsidiary” has the meaning set forth in Rule 405 under the Securities Act. As used herein, the terms “Registration Statement,” “Basic Prospectus,” “preliminary prospectus,” “Time of Sale Prospectus” and “Prospectus” shall include the documents, if any, incorporated by reference therein as of the date hereof. The terms “**supplement**,” “**amendment**,” and “**amend**” as used herein with respect to the Registration Statement, the Basic Prospectus, the Time of Sale Prospectus, any preliminary prospectus or the Prospectus shall include all documents subsequently filed by the Company with the Commission pursuant to the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), that are deemed to be incorporated by reference therein.

1. *Representations and Warranties.* The Company represents and warrants to and agrees with each of the Underwriters that:

(a) The Registration Statement has become effective; no stop order suspending the effectiveness of the Registration Statement is in effect, and no proceedings for such purpose or pursuant to Section 8A under the Securities Act are pending before or, to the Company’s knowledge, threatened by the Commission. If the Registration Statement is an automatic shelf registration statement as defined in Rule 405 under the Securities Act, the Company is a well-known seasoned issuer (as defined in Rule 405 under the Securities Act) eligible to use the Registration Statement as an automatic shelf registration statement and the Company has not received notice that the Commission objects to the use of the Registration Statement as an automatic shelf registration statement.

(b) (i) Each document, if any, filed or to be filed pursuant to the Exchange Act and incorporated by reference in the Time of Sale Prospectus or the Prospectus complied or will comply when so filed in all material respects with the Exchange Act and the applicable rules and regulations of the Commission thereunder, (ii) each part of the Registration Statement, when such part became effective, did not contain, and each such part, as amended or supplemented, if applicable, will not contain, as of the date of such amendment or supplement, any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, (iii) the Registration Statement as of the date hereof does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, (iv) the Registration Statement and the Prospectus comply and, as amended or supplemented, if applicable, will, as of the date of such amendment or supplement, comply in all material respects with the Securities Act and the applicable rules and regulations of the Commission thereunder, (v) the Time of Sale Prospectus does not, and at the time of each sale of the Securities in connection with the offering when the Prospectus is not yet available to prospective purchasers and at each Firm Securities Closing Date (as defined in Section 4), the Time of Sale Prospectus, as then amended or supplemented by the Company, if applicable, will not, contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, (vi) each broadly available road show, if any, when considered together with the Time of Sale Prospectus, does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading and (vii) the Prospectus, as of its date, does not contain and, as amended or supplemented, if applicable, will not contain, as of the date of such amendment or supplement, any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, except that the representations and warranties set forth in this paragraph do not apply to statements or omissions in the Registration Statement, the Time of Sale Prospectus or the Prospectus based upon information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use therein.

(c) The Company is not an “ineligible issuer” in connection with the offering pursuant to Rules 164, 405 and 433 under the Securities Act. Any free writing prospectus that the Company is required to file pursuant to Rule 433(d) under the Securities Act has been, or will be, filed with the Commission in accordance with the requirements of the Securities Act and the applicable rules and regulations of the Commission thereunder. Each free writing prospectus, if any, that the Company has filed, or is required to file, pursuant to Rule 433(d) under the Securities Act or that was prepared by or on behalf of or used or referred to by the Company complies or, if filed after the effective time of this Agreement, will comply as of the date of such filing in all material respects with the requirements of the Securities Act and the applicable rules and regulations of the Commission thereunder. Except for the free writing prospectuses, if any, identified in Schedule I hereto forming part of the Time of Sale Prospectus, and electronic road shows, if any, each furnished to the Representatives before first use, the Company has not prepared, used or referred to, and will not, without the Representatives’ prior consent, prepare, use or refer to, any free writing prospectus.

(d) The Company has been duly incorporated, is validly existing as a corporation in good standing under the laws of the jurisdiction of its incorporation, has the corporate power and authority to own or lease its property and to conduct its business as described in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus and is duly qualified to transact business and is in good standing (to the extent the concept of good standing is applicable in such jurisdiction) in each jurisdiction in which the conduct of its business or its ownership or leasing of property requires such qualification, except to the extent that the failure to be so qualified or be in good standing (to the extent the concept of good standing is applicable in such jurisdiction) would not reasonably be expected to, singly or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole.

(e) Each subsidiary of the Company has been duly incorporated, organized or formed, is validly existing as a corporation or other business entity in good standing under the laws of the jurisdiction of its incorporation (to the extent the concept of good standing is applicable in such jurisdiction), organization or formation, has the corporate or other business entity power and authority to own or lease its property and to conduct its business as described in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus and is duly qualified to transact business and is in good standing in each jurisdiction (to the extent the concept of good standing is applicable in such jurisdiction) in which the conduct of its business or its ownership or leasing of property requires such qualification, except to the extent that the failure to be so qualified or be in good standing (to the extent the concept of good standing is applicable in such jurisdiction) would not reasonably be expected to have a material adverse effect on the Company and its subsidiaries, taken as a whole; all of the issued shares of capital stock or other equity interests of each subsidiary of the Company have been duly and validly authorized and issued (to the extent such concepts are applicable in such jurisdictions), are fully paid and non-assessable and are owned directly or indirectly by the Company, free and clear of all liens, encumbrances, equities or claims.

(f) This Agreement has been duly authorized, executed and delivered by the Company.

(g) The authorized capital stock of the Company conforms as to legal matters to the description thereof contained in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus.

(h) The shares of Common Stock outstanding prior to the issuance of the Securities have been duly authorized and are validly issued, fully paid and non-assessable.

(i) The Shares have been duly authorized and, when issued, delivered and paid for in accordance with the terms of this Agreement, will be validly issued, fully paid and non-assessable, and the issuance of the Shares will not be subject to any preemptive or similar rights that have not been validly waived.

(j) The Pre-Funded Warrants have been duly authorized and, when executed and delivered by the Company in accordance with this Agreement, will be valid and legally binding agreements of the Company, enforceable against the Company in accordance with their terms except as the enforcement thereof may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting the rights and remedies of creditors or by general equitable principles. The maximum number of Warrant Shares to be issued by the Company upon exercise of the Pre-Funded Warrants in accordance therewith have been duly authorized and will be reserved for issuance upon exercise of the Pre-Funded Warrants in a number sufficient to meet the current exercise requirements. The Warrant Shares, when issued and delivered upon exercise of the Pre-Funded Warrants in accordance therewith, will be validly issued, fully paid and non-assessable, and the issuance of the Warrant Shares is not subject to any preemptive or similar rights not otherwise validly waived or satisfied.

(k) The execution and delivery by the Company of, and the performance by the Company of its obligations under, this Agreement will not contravene any provision of (i) applicable law, (ii) the certificate of incorporation and bylaws of the Company (iii) any agreement or other instrument binding upon the Company or any of its subsidiaries that is material to the Company and its subsidiaries, taken as a whole, or (iv) any judgment, order or decree of any governmental body, agency or court having jurisdiction over the Company or any subsidiary, except, in the cases of clauses (i), (iii) and (iv), as would not, individually or in the aggregate, reasonably be expected to have a material adverse effect on the Company and its subsidiaries, taken as a whole, or adversely affect the ability of the Company to perform its obligations under this Agreement, and no consent, approval, authorization or order of, or qualification with, any governmental body, agency or court is required for the performance by the Company of its obligations under this Agreement, except such as have been previously obtained or validly waived, or may be required by the securities or Blue Sky laws of the various states in connection with the offer and sale of the Securities.

(l) There has not occurred any material adverse change, or any development involving a prospective material adverse change, in the condition, financial or otherwise, or in the earnings, business or operations of the Company and its subsidiaries, taken as a whole, from that set forth in the Time of Sale Prospectus.

(m) There are no legal or governmental proceedings pending or, to the knowledge of the Company, threatened to which the Company or any of its subsidiaries is a party or to which any of the properties of the Company or any of its subsidiaries is subject other than proceedings accurately described in all material respects in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus and proceedings that would not reasonably be expected to, singly or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole, or on the power or ability of the Company to perform its obligations under this Agreement or to consummate the transactions contemplated by each of the Registration Statement, the Time of Sale Prospectus and the Prospectus or that are required to be described in the Registration Statement, the Time of Sale Prospectus or the Prospectus and are not so described in all material respects; and there are no statutes, regulations, contracts or other documents to which the Company or any of its subsidiaries is subject or by which the Company or any of its subsidiaries is bound that are required to be described in the Registration Statement, the Time of Sale Prospectus or the Prospectus or to be filed as exhibits to the Registration Statement that are not described in all material respects or filed as required.

(n) Each preliminary prospectus filed as part of the Registration Statement as originally filed or as part of any amendment thereto, or filed pursuant to Rule 424 under the Securities Act, complied when so filed in all material respects with the Securities Act and the applicable rules and regulations of the Commission thereunder.

(o) 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 each of the Registration Statement, the Time of Sale Prospectus and the Prospectus will not be, required to register as an “investment company” as such term is defined in the Investment Company Act of 1940, as amended.

(p) The Company and each of 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 all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses and (iii) are in compliance with all terms and conditions of any such permit, license or approval, except where such noncompliance with Environmental Laws, failure to receive required permits, licenses or other approvals or failure to comply with the terms and conditions of such permits, licenses or approvals would not, singly or in the aggregate, be reasonably expected to have a material adverse effect on the Company and its subsidiaries, taken as a whole.

(q) There are no costs or liabilities associated with Environmental Laws (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) which would, singly or in the aggregate, be reasonably expected to have a material adverse effect on the Company and its subsidiaries, taken as a whole.

(r) Except as validly waived or complied with in connection of the sale of the Securities contemplated hereby, there are no contracts, agreements or understandings between the Company and any person granting such person the right to require the Company to file a registration statement under the Securities Act with respect to any securities of the Company or to require the Company to include such securities with the Securities registered pursuant to the Registration Statement.

(s) (i) None of the Company or any of its subsidiaries or controlled affiliates, or any director, officer, or employee thereof, or, to the Company's knowledge, any agent or representative of the Company or of any of its subsidiaries or controlled affiliates, has taken or will take any action in furtherance of an offer, payment, promise to pay, or authorization or approval of the payment, giving or receipt of money, property, gifts or anything else of value, directly or indirectly, to any government official (including any officer or employee of a government or government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office) ("**Government Official**") in order to influence official action, or to any person in violation of any applicable anti-corruption laws; (ii) the Company and each of its subsidiaries and controlled affiliates have conducted their businesses in compliance with applicable anti-corruption laws and have instituted and maintained and will continue to maintain policies and procedures reasonably designed to promote and achieve compliance with such laws and with the representations and warranties contained herein; and (iii) neither the Company nor any of its subsidiaries will use, directly or indirectly, the proceeds of the offering in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to any person in violation of any applicable anti-corruption laws.

(t) The operations of the Company and each of its subsidiaries are and have been conducted at all times in material compliance with all applicable financial recordkeeping and reporting requirements, including those of the Bank Secrecy Act, as amended by Title III of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (USA PATRIOT Act), and the applicable anti-money laundering statutes of jurisdictions where the Company and each of its subsidiaries conduct business, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "**Anti-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 Anti-Money Laundering Laws is pending or, to the best knowledge of the Company, threatened.

(u) (i) None of the Company, any of its subsidiaries, or any director, officer, or employee thereof, or, to the Company's knowledge, any agent, controlled affiliate or representative of the Company or any of its subsidiaries, is an individual or entity ("**Person**") that is, or is owned or controlled by one or more Persons that are:

(A) the subject of any sanctions administered or enforced by the U.S. Department of the Treasury's Office of Foreign Assets Control, the United Nations Security Council, the European Union, His Majesty's Treasury, or other relevant sanctions authority (collectively, "**Sanctions**"), or

(B) located, organized or resident in a country or territory that is the subject of Sanctions (including, without limitation, Crimea, Cuba, Iran, North Korea, Syria and the so-called Donetsk People's Republic and the so-called Luhansk People's Republic regions of Ukraine).

(ii) The Company will not, directly or indirectly, use the proceeds of the offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other Person:

(A) to fund or facilitate any activities or business of or with any Person or in any country or territory that, at the time of such funding or facilitation, is the subject of Sanctions; or

(B) in any other manner that will result in a violation of Sanctions by any Person (including any Person participating in the offering, whether as underwriter, advisor, investor or otherwise).

(iii) The Company and each of its subsidiaries have not knowingly engaged in, are not now knowingly engaged in, and will not knowingly engage in, any dealings or transactions with any Person, or in any country or territory, that at the time of the dealing or transaction is or was the subject of Sanctions.

(v) Subsequent to the respective dates as of which information is given in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus, (i) the Company and its subsidiaries, taken as a whole, have not incurred any material liability or obligation, direct or contingent, nor entered into any material transaction; (ii) the Company has not purchased any of its outstanding capital stock, other than from employees or other service providers in connection with such person's termination of service from the Company or its subsidiaries pursuant to the existing terms of the agreements or equity

compensation plans described in the Time of Sale Prospectus or in exercise of the Company's right of first refusal upon a proposed transfer, nor declared, paid or otherwise made any dividend or distribution of any kind on its capital stock other than ordinary and customary dividends; and (iii) there has not been any material change in the capital stock (other than the exercise or conversion of equity awards, warrants or convertible notes or loans or grants of equity awards or forfeiture of equity awards outstanding as of such respective dates as of which information is given in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus, in each case granted pursuant to the equity compensation plans described in the Time of Sale Prospectus), short-term debt or long-term debt of the Company and its subsidiaries, taken as a whole, except in each case as described in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus.

(w) The Company and its subsidiaries do not own any real property. The Company and its subsidiaries have good and marketable title to all personal property (excluding intellectual property, which is addressed exclusively in Section 1(w)) owned by them which is material to the business of the Company and its subsidiaries, taken as a whole, in each case free and clear of all liens, encumbrances and defects except such as do not materially diminish the value of such property and do not interfere in any material respect with the use made and proposed to be made of such property by the Company and its subsidiaries; and any real property and buildings held under lease by the Company and its subsidiaries are held by them under valid, subsisting and, to the knowledge of the Company, enforceable leases with such exceptions as are not material and do not interfere in any material respect with the use made and proposed to be made of such property and buildings by the Company and its subsidiaries, in each case except as described in the Registration Statement, the Time of Sale Prospectus and the Prospectus.

(x) Except as described in the Registration Statement, the Time of Sale Prospectus or the Prospectus and except as would not reasonably be expected to have a material adverse effect on the Company and its subsidiaries taken as a whole, (i) the Company and its subsidiaries own, have a valid license to use, or can acquire on commercially reasonable terms adequate rights to use, all patents, inventions, copyrights, know how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures), trademarks, service marks and trade names and all other intellectual property and proprietary rights (including all registrations and applications for registration of, and all goodwill associated with, any of the foregoing) (collectively, "**Intellectual Property Rights**") used in or reasonably necessary to the conduct of their respective businesses as now conducted by them and as proposed in the Registration Statement, Time of Sale Prospectus and Prospectus to be conducted by them; (ii) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others challenging the validity, scope or enforceability of, or any rights of the Company or any of its subsidiaries in, any such Intellectual Property Rights owned by or exclusively licensed to the

Company and to the knowledge of the Company, all such Intellectual Property Rights are valid and enforceable; (iii) neither the Company nor any of its subsidiaries has received any written notice alleging any infringement, misappropriation or other violation of Intellectual Property Rights and there is no pending action, suit, proceeding or claim alleging that the Company or any of its subsidiaries has infringed, misappropriated or otherwise violated any Intellectual Property Rights; (iv) to the Company's knowledge, no third party is infringing, misappropriating or otherwise violating, or has infringed, misappropriated or otherwise violated, any Intellectual Property Rights owned by or exclusively licensed to the Company or any of its subsidiaries; (v) to the Company's knowledge, neither the Company nor any of its subsidiaries infringes, misappropriates or otherwise violates, or has infringed, misappropriated or otherwise violated, any Intellectual Property Rights; (vi) all employees or contractors engaged in the development of Intellectual Property Rights on behalf of the Company or any of its subsidiaries have executed an invention assignment agreement whereby such employees or contractors presently assign all of their right, title and interest in and to such Intellectual Property Rights to the Company or its applicable subsidiary, and to the Company's knowledge no such agreement has been breached or violated; and (vii) the Company and its subsidiaries use, and have used, reasonable efforts in accordance with normal industry practice to appropriately maintain the confidentiality of all Intellectual Property Rights of the Company and its subsidiaries the value of which to the Company or any of its subsidiaries is contingent upon maintaining the confidentiality thereof, and no such Intellectual Property Rights have been disclosed other than to employees, representatives and agents of the Company or any of its subsidiaries, all of whom are bound by written confidentiality agreements.

(y) Except as described in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus and except as would not reasonably be expected to have a material adverse effect on the Company and its subsidiaries, taken as a whole, (i) the Company and its subsidiaries use and have used any and all software and other materials distributed under a "free," "open source," or similar licensing model (including but not limited to the MIT License, Apache License, GNU General Public License, GNU Lesser General Public License and GNU Affero General Public License) ("**Open Source Software**") in compliance with all license terms applicable to such Open Source Software; and (ii) neither the Company nor any of its subsidiaries uses or distributes or has used or distributed any Open Source Software in any manner that requires or has required (A) the Company or any of its subsidiaries to permit reverse engineering of any software code or other technology owned by the Company or any of its subsidiaries or (B) any software code or other technology owned by the Company or any of its subsidiaries to be (1) disclosed or distributed in source code form, (2) licensed for the purpose of making derivative works or (3) redistributed at no charge.

(z) Except as described in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus and except as would not reasonably be expected to have a material adverse effect on the Company and its subsidiaries, taken as a whole, (i) the Company and each of its subsidiaries have complied and are presently in compliance with all internal and external privacy policies of the Company and its subsidiaries, contractual obligations, industry standards and applicable laws, statutes, judgments, orders, rules and regulations of any court or arbitrator or other governmental or regulatory authority, in each case, relating to the collection, use, transfer, import, export, storage, protection, disposal and disclosure by the Company or any of its subsidiaries of personal, personally identifiable, household, sensitive, confidential or regulated data or information (“**Data Security Obligations**”, and such data and information, “**Personal Data**”); (ii) the Company and its subsidiaries have not received any written notification of or written complaint regarding and are unaware of any other facts that, individually or in the aggregate, would reasonably indicate non-compliance with any Data Security Obligation by the Company or any of its subsidiaries; and (iii) there is no action, suit or proceeding by or before any court or governmental agency, authority or body pending or, to the Company’s knowledge, threatened alleging non-compliance with any Data Security Obligation by the Company or any of its subsidiaries.

(aa) Except as described in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus and except as would not reasonably be expected to have a material adverse effect on the Company and its subsidiaries, taken as a whole, (i) the Company and each of its subsidiaries’ respective information technology assets and equipment, computers, systems, networks, hardware, software, internet websites, applications, technology, data and databases (including Personal Data of their respective customers, employees, suppliers, vendors and any third-party sensitive or confidential data maintained, processed or stored by or on behalf of the Company or any of its subsidiaries) used in connection with the operation of the Company’s and its subsidiaries’ respective businesses as currently conducted by them (collectively, “**IT Systems and Data**”) are adequate for, and operate and perform as reasonably required in connection with the operation of the business of the Company and its subsidiaries as currently conducted, free and clear of all bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants; (ii) the Company and each of its subsidiaries have taken commercially reasonable technical and organizational measures necessary to protect the IT Systems and Data, and have used reasonable efforts to establish and maintain, and have established, maintained, implemented and complied with, reasonable information technology, information security, cyber security and data protection controls, policies and procedures, including oversight, access controls, encryption, technological and physical safeguards and business continuity/disaster recovery and security plans, consistent with industry standards and practices, that are designed to protect against and prevent breach, destruction, loss, unauthorized distribution, use, access, disablement, misappropriation or modification, or other compromise or misuse of or relating to any IT Systems and Data (“**Breach**”); and (iii) there has been no such Breach, and 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 such Breach.

(bb) No material labor dispute with the employees of the Company or any of its subsidiaries exists or, to the knowledge of the Company, is imminent; and the Company is not aware of any existing, threatened or imminent labor disturbance by the employees of any of its principal suppliers, manufacturers or contractors that would reasonably be expected have a material adverse effect on the Company and its subsidiaries, taken as a whole.

(cc) 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, in the reasonable judgment of the Company, are prudent and customary in the businesses in which they are engaged; neither the Company nor any of its subsidiaries has been refused any insurance coverage sought or applied for; and neither the Company nor any of its subsidiaries 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, singly or in the aggregate, reasonably be expected to have a material adverse effect on the Company and its subsidiaries, taken as a whole.

(dd) The Company and each of its subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state or foreign regulatory authorities necessary to conduct their respective businesses except where the failure to obtain such certificates, authorizations or permits would not, individually or in the aggregate, be reasonably expected to have a material adverse effect on the Company and its subsidiaries, taken as a whole, and neither the Company nor any of its subsidiaries has received any notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a material adverse effect on the Company and its subsidiaries, taken as a whole.

(ee) Except as would not reasonably be expected to have a material adverse effect on the Company and its subsidiaries, taken as a whole, the Company has operated at all times and is currently in compliance with all applicable statutes, rules and regulations of the U.S. Food and Drug Administration (the “**FDA**”) and applicable foreign regulatory authorities, including the European Medicines Agency and the UK Medicines & Healthcare products Regulatory Agency (collectively, the “**Regulatory Authorities**”), including, without limitation:

(iv) the Federal Food, Drug, and Cosmetic Act and the regulations promulgated thereunder;

(v) applicable federal, state, local and foreign health care laws, including the U.S. Anti-Kickback Statute (42 U.S.C. Section 1320a-7b(b)), the Civil Monetary Penalties Law (42 U.S.C. § 1320a-7a), the U.S. Civil False Claims Act (31 U.S.C. Section 3729 et seq.), all applicable federal, state, local and all foreign criminal laws relating to health care fraud and abuse, including but not limited to false statements relating to health care matters (42 U.S.C. Section 1320a-7b(a)), 18 U.S.C. Sections 286 and 287, and the health care fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 (“**HIPAA**”) (42 U.S.C. Section 1320d et seq.), the exclusion laws, the statutes, regulations and directives of applicable government funded or sponsored healthcare programs, and the regulations promulgated pursuant to such statutes;

(vi) the Standards for Privacy of Individually Identifiable Health Information, the Security Standards, and the Standards for Electronic Transactions and Code Sets promulgated under HIPAA, the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. Section 17921 et seq.), and the regulations promulgated thereunder and any state or non-U.S. counterpart thereof or any other law or regulation the purpose of which is to protect the privacy of individuals or prescribers;

(vii) the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, the regulations promulgated thereunder;

(viii) the U.S. Controlled Substances Act (21 U.S.C. Section 801 et seq.);

(ix) the Clinical Laboratories Improvement Act of 1967, as amended) (“**CLIA**”);

(x) licensure, quality, safety and accreditation requirements under applicable federal, state, local or foreign laws or regulatory bodies; and

(xi) all other local, state, federal, national, supranational and foreign laws, relating to the regulation of the Company and the ownership, testing, development, manufacture, packaging, processing, use, distribution, marketing, labeling, promotion, sale, offer for sale, storage, import, export or disposal of any product under development, manufactured or distributed by the Company; (clauses (i) through (viii), collectively, “**Health Care Laws**”).

(ff) (i) Except as would not reasonably be expected to have a material adverse effect on the Company and its subsidiaries, taken as a whole, the studies, tests and preclinical and clinical trials conducted by or, to the Company's knowledge, on behalf of or sponsored by the Company or in which the Company has participated, were, and if still pending are being conducted in accordance with standard medical and experimental protocols, procedures and controls pursuant to accepted professional scientific research standards and procedures, and all applicable Health Care Laws, the rules and regulations of the Regulatory Authorities and, to the extent required, current Good Clinical Practices and Good Laboratory Practices; (ii) the descriptions of the results of such studies and trials contained in the Registration Statement, the Time of Sale Prospectus or the Prospectus are accurate and complete in all material respects and fairly present the data derived from such trials and studies; (iii) the Company has no knowledge of any other studies or trials not described in the Registration Statement, the Time of Sale Prospectus and the Prospectus, the results of which are materially inconsistent with or call into question the results described or referred to in the Registration Statement, the Time of Sale Prospectus and the Prospectus, and has provided the Underwriters with all substantive written notices, correspondence and summaries of all other communications provided to the Company from the Regulatory Authorities; and (iv) the Company has not received any written notices or correspondence from any Regulatory Authority or any other governmental entity requiring the termination, material modification or suspension of any studies or trials that are described in the Registration Statement, the Time of Sale Prospectus and the Prospectus or the results of which are referred to in the Registration Statement, the Time of Sale Prospectus and the Prospectus.

(gg) Except as would not reasonably be expected to have a material adverse effect on the Company and its subsidiaries, taken as a whole, (i) the Company has filed, obtained, maintained or submitted all reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws, and, all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were timely, complete, accurate and not misleading on the date filed (or were corrected or supplemented by a subsequent submission); (ii) the Company has not received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any court or arbitrator or Regulatory Authority, other governmental entity or third party alleging that any Company or product operation or activity is in violation of any Health Care Laws, including, without limitation, any FDA Form 483, notice of adverse finding, warning letter, untitled letter or other correspondence or notice from the FDA or any other Regulatory Authority or governmental entity, nor, to the Company's knowledge, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened; (iii) the Company is not a party to any corporate integrity agreements, monitoring agreements, consent decrees, settlement orders, or similar agreements with or imposed by any Regulatory Authority or other governmental entity; and (iv) neither the Company nor its employees, officers or directors has been excluded, suspended or debarred from participation in any U.S. federal health care program or human clinical research or, to the knowledge of the Company, is subject to an inquiry, investigation, proceeding or other similar action by a Regulatory Authority or other governmental entity that could reasonably be expected to result in debarment, suspension, or exclusion.

(hh) The Company's clinical laboratory tests are conducted in material compliance with all applicable Health Care Laws, and, to the extent applicable, the respective counterparts thereof promulgated by governmental authorities in countries outside the United States. The Company has not received written notice from any Regulatory Authority alleging or asserting noncompliance with any applicable Health Care Law. To the Company's knowledge, neither the FDA nor any other governmental authority is considering such action.

(ii) The financial statements included or incorporated by reference in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus, together with the related schedules and notes thereto, comply as to form in all material respects with the applicable accounting requirements of the Securities Act and present fairly in all material respects the consolidated financial position of the Company and its subsidiaries as of the dates shown and its results of operations and cash flows for the periods shown, and such financial statements have been prepared in conformity with generally accepted accounting principles in the United States ("**U.S. GAAP**") applied on a consistent basis throughout the periods covered thereby except for any normal year-end adjustments in the Company's quarterly financial statements. The other financial information included or incorporated by reference in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus has been derived from the accounting records of the Company and its consolidated subsidiaries and presents fairly in all material respects the information shown thereby. The statistical, industry-related and market-related data included or incorporated by reference in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus are based on or derived from sources which the Company reasonably and in good faith believes are reliable and accurate and such data is consistent with the sources from which they are derived, in each case in all material respects and, to the extent required, the Company has obtained the written consent to the use of such data from such sources.

(jj) Deloitte & Touche LLP, who have certified certain financial statements of the Company and its subsidiaries and delivered its report with respect to the audited consolidated financial statements and schedules filed with the Commission as part of the Registration Statement and included or incorporated by reference in each of the Registration Statement, the Time of Sale Prospectus 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 rules and regulations thereunder adopted by the Commission and the Public Company Accounting Oversight Board (United States).

(kk) The Company and its subsidiaries, taken as a whole, maintain a system of internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with U.S. GAAP 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 eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement is accurate. Except as described in the Time of Sale Prospectus, since the end of the Company's most recent audited fiscal year, there has been (i) no material weakness in the Company's internal control over financial reporting (whether or not remediated) and (ii) no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(ll) Except as described in the Registration Statement of the Time of Sale Prospectus, the Company has not sold, issued or distributed any shares of Common Stock during the six-month period preceding the date hereof, including any sales pursuant to Rule 144A under, or Regulation D or S of, the Securities Act, other than shares issued pursuant to employee benefit plans, qualified stock option plans or other employee compensation plans or pursuant to outstanding options, rights or warrants.

(mm) The Company and each of its subsidiaries have filed all federal, state, local and foreign tax returns required to be filed through the date of this Agreement or have requested extensions thereof (except where the failure to file would not be reasonably expected to, singly or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole) and have paid all taxes required to be paid thereon (except for cases in which the failure to file or pay would not be reasonably expected to, singly or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole, or, except as currently being contested in good faith and for which reserves required by U.S. GAAP have been created in the financial statements of the Company), and no tax deficiency has been determined adversely to the Company or any of its subsidiaries which, singly or in the aggregate, has had (nor does the Company nor any of its subsidiaries have any notice or knowledge of any tax deficiency which would reasonably be expected to be determined adversely to the Company or its subsidiaries and which would reasonably be expected to have) a material adverse effect on the Company and its subsidiaries, taken as a whole.

(nn) Neither the Company nor any of its subsidiaries has any securities rated by any "nationally recognized statistical rating organization," as such term is defined in Section 3(a)(62) of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**").

(oo) From the date of the Basic Prospectus through the date hereof, the Company has been and is an “emerging growth company,” as defined in Section 2(a) of the Securities Act (an “**Emerging Growth Company**”).

(pp) The Company (i) has not alone engaged in any Testing-the-Waters Communication with any person and (ii) has not authorized anyone other than the Representatives to engage in Testing-the-Waters Communications. The Company reconfirms that the Representatives have been authorized to act on its behalf in undertaking Testing-the-Waters Communications. The Company has not distributed any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Securities Act. “**Testing-the-Waters Communication**” means any oral or written communication with potential investors undertaken in reliance on Section 5(d) or Rule 163B of the Securities Act.

(qq) The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement fairly presents the information called for in all material respects and has been prepared in accordance with the Commission’s rules and guidelines applicable thereto.

2. *Agreements to Sell and Purchase.* The Company hereby agrees to sell to the several Underwriters, and each Underwriter, upon the basis of the representations and warranties herein contained, but subject to the terms and conditions hereinafter stated, agrees, severally and not jointly, to purchase from the Company the respective numbers of Firm Securities set forth in Schedule II hereto opposite its name at the purchase prices set forth in Schedule I hereto (in the case of the Firm Shares, the “**Purchase Price**”, and in the case of the Pre-Funded Warrants, the “**Warrant Purchase Price**”); provided that an aggregate of 37,500,000 Pre-Funded Warrants (the “**Indication of Interest Securities**”) proposed to be sold by the Underwriters to entities affiliated with the Company’s 10% stockholders affiliated with its directors (the “**Indication of Interest Purchasers**”) shall be purchased at the Public Offering Price and the Public Offering Price per Warrant, respectively. To the extent the Indication of Interest Purchasers do not purchase Indication of Interest Securities on the Second Closing Date (as defined in Section 4 hereto), the purchase price of such securities shall be the Warrant Purchase Price.

On the basis of the representations and warranties contained in this Agreement, and subject to its terms and conditions, the Company agrees to sell to the Underwriters the Additional Shares, and the Underwriters shall have the right to purchase, severally and not jointly, up to the number of Additional Shares set forth in Schedule I hereto at the Purchase Price, provided, however, that the amount paid by the Underwriters for any Additional Shares shall be reduced by an amount per share equal to any dividends declared by the Company and payable on the Firm Shares but not payable on such Additional Shares. The Representatives may exercise this right on behalf of the Underwriters in whole or from time to time in part by giving written notice not later than 30 days after the date of this Agreement. Any exercise notice shall specify the number of Additional Shares to be purchased by the Underwriters and the date on which such shares

are to be purchased. Each purchase date must be at least one business day after the written notice is given and may not be earlier than the closing date for the Firm Securities nor later than ten business days after the date of such notice. Additional Shares may be purchased as provided in Section 4 hereof solely for the purpose of covering over-allotments made in connection with the offering of the Firm Shares. On each day, if any, that Additional Shares are to be purchased (an “**Option Closing Date**”), each Underwriter agrees, severally and not jointly, to purchase the number of Additional Shares (subject to such adjustments to eliminate fractional shares as the Representatives may determine) that bears the same proportion to the total number of Additional Shares to be purchased on such Option Closing Date as the aggregate number of Firm Shares set forth in Schedule II hereto opposite the name of such Underwriter bears to the total number of Firm Shares.

3. *Terms of Public Offering.* The Company is advised by the Representatives that the Underwriters propose to make a public offering of their respective portions of the Securities as soon after the Registration Statement and this Agreement have become effective as in the Representatives’ judgment is advisable. The Company is further advised by the Representatives that the Securities are to be offered to the public upon the terms set forth in the Prospectus.

Notwithstanding the foregoing, the Company and the Representatives shall instruct purchasers of the Pre-Funded Warrants in the public offering to make payment for the Pre-Funded Warrants on the Second Closing Date to the Company by wire transfer in immediately available funds to the account specified by the Company, in lieu of payment by the Underwriters for such Pre-Funded Warrants, and the Company shall deliver such Pre-Funded Warrants to such purchasers on the Second Closing Date in definitive form against such payment, in lieu of the Company’s obligation to deliver such Pre-Funded Warrants to the Underwriters; provided that the Company shall promptly (but in no event later than the Second Closing Date) pay \$0.12 per such Pre-Funded Warrant to the Underwriters by wire transfer in immediately available funds to the account specified by the Representatives.

In the event that the purchasers of the Pre-Funded Warrants in the public offering fail to make payment to the Company for all or part of the Pre-Funded Warrants on the Second Closing Date, the Representatives may elect, by written notice to the Company, to receive shares of Common Stock in lieu of all or a portion of such Pre-Funded Warrants to be delivered to the Underwriters under this Agreement.

4. *Payment and Delivery.* Payment for the Firm Securities shall be made to the Company in Federal or other funds immediately available in New York City against delivery of such Firm Securities for the respective accounts of the several Underwriters on the applicable closing date and time set forth in Schedule I hereto with respect to the Firm Shares, on the one hand, and the Pre-Funded Warrants, on the other, or at such other time on the same or such other date, not later than the fifth business day thereafter, as shall be designated in writing by the Representatives. The times and dates of such payments are hereinafter referred to as, with respect to the Firm Shares, the “**First Closing Date**,” and with respect to the Pre-Funded Warrants, the “**Second Closing Date**” (and each such date, a “**Firm Securities Closing Date**”).

Payment for any Additional Shares shall be made to the Company in Federal or other funds immediately available in New York City against delivery of such Additional Shares for the respective accounts of the several Underwriters on the date specified in the corresponding notice described in Section 2 or at such other time on the same or on such other date, in any event not later than the tenth business day thereafter, as shall be designated in writing by the Representatives.

The Firm Securities and Additional Shares shall be registered in such names and in such denominations as the Representatives shall request in writing not later than one full business day prior to the applicable Firm Securities Closing Date or the applicable Option Closing Date, as the case may be. The Firm Securities and Additional Shares shall be delivered to the Representatives on the applicable Firm Securities Closing Date or an Option Closing Date, as the case may be, for the respective accounts of the several Underwriters, with any transfer taxes payable in connection with the transfer of the Securities to the Underwriters duly paid, against payment of the Purchase Price, in the case of the Firm Shares, and the Warrant Purchase Price, in the case of the Pre-Funded Warrants, therefor. The Pre-Funded Warrants will be made available for inspection by the Representatives on the day prior to the Second Closing Date.

5. *Conditions to the Underwriters' Obligations.* The several obligations of the Underwriters are subject to the following conditions:

(a) Subsequent to the execution and delivery of this Agreement and prior to the First Closing Date:

(i) no order suspending the effectiveness of the Registration Statement shall be in effect, and to the Company's knowledge, no proceeding for such purpose or pursuant to Section 8A under the Securities Act shall be pending before or threatened by the Commission; and

(ii) there shall not have occurred any change, or any development involving a prospective change, in the condition, financial or otherwise, or in the earnings, business or operations of the Company and its subsidiaries, taken as a whole, from that set forth in the Time of Sale Prospectus that, in the Representatives' judgment, is material and adverse and that makes it, in the Representatives' judgment, impracticable to market the Securities on the terms and in the manner contemplated in the Time of Sale Prospectus.

(b) The Underwriters shall have received on the First Closing Date a certificate, dated the First Closing Date and signed on behalf of the Company by an executive officer of the Company, to the effect set forth in Section 5(i) above and to the effect that the representations and warranties of the Company contained in this Agreement are true and correct as of the First Closing Date and that the Company has complied with all of the agreements and satisfied all of the conditions on its part to be performed or satisfied hereunder on or before the First Closing Date. The officer signing and delivering such certificate may rely upon the best of his or her knowledge as to proceedings threatened.

(c) The Underwriters shall have received on the First Closing Date (i) an opinion and (ii) negative assurance letter of Goodwin Procter LLP, outside counsel for the Company, dated the First Closing Date, in form and substance reasonably satisfactory to the Representatives.

(d) The Underwriters shall have received on the First Closing Date an opinion of Foley Hoag LLP, outside intellectual property counsel for the Company, dated the First Closing Date, in form and substance reasonably satisfactory to the Representatives.

(e) The Underwriters shall have received on the First Closing Date (i) an opinion and (ii) negative assurance letter of Davis Polk & Wardwell LLP, counsel for the Underwriters, dated the First Closing Date, in form and substance reasonably satisfactory to the Representatives.

With respect to the negative assurance letters to be delivered pursuant to Sections 5(c) and 5(d) above, Goodwin Procter LLP and Davis Polk & Wardwell LLP may state that their opinions and beliefs are based upon their participation in the preparation of the Registration Statement, the Time of Sale Prospectus and the Prospectus and any amendments or supplements thereto and review and discussion of the contents thereof, but are without independent check or verification, except as specified.

The opinions of Goodwin Procter LLP and Davis Polk & Wardwell LLP described in Sections 5(c) and 5(d) above, respectively, shall be rendered to the Underwriters at the request of the Company and shall so state therein.

(f) The Underwriters shall have received, on each of the date hereof and the First Closing Date, a letter dated the date hereof or the First Closing Date, as the case may be, in form and substance satisfactory to the Underwriters, from Deloitte & Touche LLP, independent public accountants, containing statements and information of the type ordinarily included in accountants' "comfort letters" to underwriters with respect to the financial statements and certain financial information contained in the Registration Statement, the Time of Sale Prospectus and the Prospectus; *provided* that the letter delivered on the First Closing Date shall use a "cut-off date" not earlier than the date hereof.

(g) The "lock-up" agreements, each substantially in the forms of Exhibit A hereto, between the Representatives and certain stockholders, officers and directors of the Company listed on Schedule III hereto relating to restrictions on sales and certain other dispositions of shares of Common Stock or certain other securities, delivered to the Representatives on or before the date hereof (the "**Lock-up Agreements**"), shall be in full force and effect on the First Closing Date.

(h) The shares of Common Stock sold pursuant to this Agreement and shares of Common Stock equivalent to the number of Warrant Shares sold pursuant to this Agreement shall have been submitted for listing on the Nasdaq Global Market.

(i) The several obligations of the Underwriters to purchase Additional Shares hereunder are subject to the delivery to the Representatives on each of the Second Closing Date and the applicable Option Closing Date (each date, a “**Subsequent Closing Date**”) of the following:

(i) a certificate, dated the Subsequent Closing Date and signed by an executive officer of the Company, confirming that the certificate delivered on the First Closing Date pursuant to Section 1(b) hereof remains true and correct as of such Subsequent Closing Date;

(ii) an opinion and negative assurance letter of Goodwin Procter LLP, outside counsel for the Company, dated the Subsequent Closing Date, relating to, in the case of the Second Closing Date, the Pre-Funded Warrants, and in the case of the Option Closing Date, the Additional Shares, to be purchased on such Subsequent Closing Date and otherwise to the same effect as the opinion required by Section 1(c) hereof;

(iii) an opinion of Foley Hoag LLP, outside intellectual property counsel for the Company, dated the Subsequent Closing Date, relating to, in the case of the Second Closing Date, the Pre-Funded Warrants, and in the case of the Option Closing Date, the Additional Shares, to be purchased on such Subsequent Closing Date and otherwise to the same effect as the opinion required by Section 1(c)(5)(d) hereof;

(iv) an opinion and negative assurance letter of Davis Polk & Wardwell LLP, counsel for the Underwriters, dated the Subsequent Closing Date, relating to, in the case of the Second Closing Date, the Pre-Funded Warrants, and in the case of the Option Closing Date, the Additional Shares, to be purchased on such Subsequent Closing Date and otherwise to the same effect as the opinion required by Section 1(c) hereof;

(v) a letter dated the Subsequent Closing Date, in form and substance satisfactory to the Underwriters, from Deloitte LLP, independent public accountants, substantially in the same form and substance as the letter furnished to the Underwriters pursuant to Section 1(f) hereof; *provided* that the letter delivered on the Subsequent Closing Date shall use a “cut-off date” not earlier than two business days prior to such Subsequent Closing Date; and

(vi) such other documents as the Representatives may reasonably request, including with respect to the good standing of the Company and its significant subsidiaries, the due authorization and issuance of, in the case of the Second Closing Date, the Pre-Funded Warrants, and in the case of the Option Closing Date, the Additional Shares, to be sold on such Subsequent Closing Date and other matters related to the issuance of such Additional Shares.

6. *Covenants of the Company.* The Company covenants with each Underwriter as follows:

(a) To furnish to the Representatives without charge, five signed copies of the Registration Statement (including exhibits thereto and documents incorporated by reference therein) and for delivery to each other Underwriter a conformed copy of the Registration Statement (without exhibits thereto) and to furnish to the Representatives in New York City, without charge, prior to 10:00 a.m. New York City time on the business day next succeeding the date of this Agreement and during the period mentioned in Section 1(e) or 1(f) below, as many copies of the Time of Sale Prospectus, the Prospectus, and any documents incorporated by reference therein and any supplements and amendments thereto or to the Registration Statement as the Representatives may reasonably request.

(b) Before amending or supplementing the Registration Statement, the Time of Sale Prospectus or the Prospectus, to furnish to the Representatives a copy of each such proposed amendment or supplement and not to file any such proposed amendment or supplement to which the Representatives reasonably object.

(c) To furnish to the Representatives a copy of each proposed free writing prospectus to be prepared by or on behalf of, used by, or referred to by the Company and not to use or refer to any proposed free writing prospectus to which the Representatives reasonably object.

(d) Not to take any action that would result in an Underwriter or the Company being required to file with the Commission pursuant to Rule 433(d) under the Securities Act a free writing prospectus prepared by or on behalf of the Underwriter that the Underwriter otherwise would not have been required to file thereunder.

(e) If the Time of Sale Prospectus is being used to solicit offers to buy the Securities at a time when the Prospectus is not yet available to prospective purchasers and any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Time of Sale Prospectus in order to make the statements therein, in the light of the circumstances, not misleading, or if any event shall occur or condition exist as a result of which the Time of Sale Prospectus conflicts with the information contained in the Registration Statement then on file, or if, in the opinion of counsel for the Underwriters, it is necessary to amend or supplement the Time of Sale Prospectus to comply with applicable law, forthwith to prepare, file with the Commission and furnish, at its own expense, to the Underwriters and to any dealer upon request, either amendments or supplements to the Time of Sale Prospectus so that the statements in the Time of Sale Prospectus as so amended or supplemented will not, in the light of the circumstances when the Time of Sale Prospectus is delivered to a prospective purchaser, be misleading or so that the Time of Sale Prospectus, as amended or supplemented, will no longer conflict with the Registration Statement, or so that the Time of Sale Prospectus, as amended or supplemented, will comply with applicable law.

(f) If, during such period after the first date of the public offering of the Securities as in the opinion of counsel for the Underwriters the Prospectus (or in lieu thereof the notice referred to in Rule 173(a) of the Securities Act) is required by law to be delivered in connection with sales by an Underwriter or dealer, any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Prospectus in order to make the statements therein, in the light of the circumstances when the Prospectus (or in lieu thereof the notice referred to in Rule 173(a) of the Securities Act) is delivered to a purchaser, not misleading, or if, in the opinion of counsel for the Underwriters, it is necessary to amend or supplement the Prospectus to comply with applicable law, forthwith to prepare, file with the Commission and furnish, at its own expense, to the Underwriters and to the dealers (whose names and addresses the Representatives will furnish to the Company) to which Securities may have been sold by the Representatives on behalf of the Underwriters and to any other dealers upon request, either amendments or supplements to the Prospectus so that the statements in the Prospectus as so amended or supplemented will not, in the light of the circumstances when the Prospectus (or in lieu thereof the notice referred to in Rule 173(a) of the Securities Act) is delivered to a purchaser, be misleading or so that the Prospectus, as amended or supplemented, will comply with applicable law.

(g) To endeavor to qualify the Securities for offer and sale under the securities or Blue Sky laws of such jurisdictions as the Representatives shall reasonably request; provided, however, that nothing contained herein shall require the Company to qualify to do business in any jurisdiction, execute a general consent to service of process in any jurisdiction or to subject itself to taxation in any jurisdiction in which it is not otherwise subject.

(h) To make generally available (which may be satisfied by filing with the Commission on its Electronic Data Gathering, Analysis and Retrieval System) to the Company's security holders and to the Representatives as soon as practicable an earnings statement covering a period of at least twelve months beginning with the first fiscal quarter of the Company occurring after the date of this Agreement which shall satisfy the provisions of Section 11(a) of the Securities Act and the rules and regulations of the Commission thereunder.

(i) Whether or not the transactions contemplated in this Agreement are consummated or this Agreement is terminated, to pay or cause to be paid all expenses incident to the performance of its obligations under this Agreement, including: (i) the fees, disbursements and expenses of the Company's counsel and the Company's accountants in connection with the registration and delivery of the Securities under the Securities Act, including the costs of reproducing and distributing each of the Pre-Funded Warrants, and all other fees or expenses in connection with the preparation and filing of the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, the Prospectus, any free writing prospectus prepared by or on behalf of, used by, or referred to by the Company and amendments and supplements to any of the foregoing, including the filing fees payable to the Commission relating to the Securities (within the time required by Rule 456(b)(1), if applicable), all printing costs associated therewith, and the mailing and delivering of copies thereof to the Underwriters and dealers, in the quantities hereinabove specified, (ii) all costs and expenses related to the transfer and delivery of the Securities to the Underwriters, including any transfer or other similar taxes payable thereon, (iii) the reasonable, documented cost of printing or producing any Blue Sky or Legal Investment memorandum in connection with the offer and sale of the Securities under state securities laws and all expenses in connection with the qualification of the Securities for offer and sale under state securities laws as provided in Section 1(g) hereof, including filing fees and the reasonable, documented fees and disbursements of counsel for the Underwriters in connection with such qualification and in connection with the Blue Sky or Legal Investment memorandum, (iv) all filing fees and the reasonable fees and disbursements of counsel to the Underwriters incurred in connection with the review and qualification of the offering of the Securities by the Financial Industry Regulatory Authority (provided, that, the amount payable by the Company with respect to fees and disbursements of counsel for the Underwriters pursuant to subsections (iii) and (iv) shall not exceed \$30,000 in the aggregate), (v) all costs and expenses incident to listing the Securities on the NASDAQ Global Market, (vi) the cost of printing certificates representing the Securities, (vii) the costs and charges of any transfer agent, registrar or depository, (viii) the costs and expenses of the Company relating to investor presentations on any "road show" undertaken in connection with the marketing of the offering of the Securities, including, without limitation, expenses associated with the preparation or dissemination of any electronic road show, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations with the prior approval of the Company, travel and lodging expenses of the representatives and officers of the Company and any such consultants, and fifty percent (50%) the cost of any aircraft chartered in connection with the road show (the remaining fifty percent (50%) of the cost of such aircraft to be paid by the Underwriters), (ix) the document production charges and expenses associated with printing this Agreement, and (x) all other costs and expenses incident to the performance of the

obligations of the Company hereunder for which provision is not otherwise made in this Section. It is understood, however, that except as provided in this Section, Section 8 entitled “Indemnity and Contribution” and the last paragraph of Section 10 below, the Underwriters will pay all of their costs and expenses, including fees and disbursements of their counsel, stock transfer taxes payable on resale of any of the Securities by them and any advertising expenses connected with any offers they may make and all travel and lodging expenses of the Underwriters or any of their employees incurred by them in connection with participation in investor presentations on any “road show” undertaken in connection with the marketing of the offering of the Securities, other than the cost of aircraft chartered in connection with the roadshow, for which the Underwriters agree to pay for the other one-half not paid for by the Company, as described above.

(j) If the third anniversary of the initial effective date of the Registration Statement occurs before all the Securities have been sold by the Underwriters, prior to the third anniversary to file a new shelf registration statement and to take any other action necessary to permit the public offering of the Securities to continue without interruption; references herein to the Registration Statement shall include the new registration statement declared effective by the Commission.

(k) If requested by the Representatives, to prepare a final term sheet relating to the offering of the Securities, containing only information that describes the final terms of the offering in a form consented to by the Representatives, and to file such final term sheet within the period required by Rule 433(d)(5)(ii) under the Securities Act following the date the final terms have been established for the offering of the Securities.

(l) The Company will promptly notify the Representatives if the Company ceases to be an Emerging Growth Company at any time prior to the later of (i) completion of the distribution of the Securities within the meaning of the Securities Act and (ii) completion of the Restricted Period (as defined in this Section 6).

(m) If at any time following the distribution of any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Securities Act there occurred or occurs an event or development as a result of which such Testing-the-Waters Communication included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Company will promptly notify the Representatives and will promptly amend or supplement, at its own expense, such Testing-the-Waters Communication to eliminate or correct such untrue statement or omission.

(n) The Company will deliver to each Underwriter (or its agent), on the date of execution of this Agreement, a properly completed and executed Certification Regarding Beneficial Owners of Legal Entity Customers, together with copies of identifying documentation, and the Company undertakes to provide such additional supporting documentation as each Underwriter may reasonably request in connection with the verification of the foregoing Certification.

The Company also covenants with each Underwriter that, without the prior written consent of Morgan Stanley & Co. LLC on behalf of the Underwriters, it will not, and will not publicly disclose an intention to, during the restricted period set forth in Schedule I hereto (the “**Restricted Period**”), (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock or (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Common Stock, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise or (3) file any registration statement with the Commission relating to the offering of any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock.

The restrictions contained in the preceding paragraph shall not apply to (A) the Securities to be sold hereunder, including, for the avoidance of doubt, the issuance by the Company of the Warrant Shares upon the exercise of Pre-Funded Warrants, (B) the issuance by the Company of shares of Common Stock upon the exercise of an option or warrant, the settlement of restricted stock units or share value award, or the conversion of a convertible loan, note or other security outstanding on the date hereof as described in each of the Time of Sale Prospectus and Prospectus, (C) the grant of options, restricted stock units, share value awards or any other type of equity award described in the Time of Sale Prospectus and the Prospectus pursuant to employee benefit plans in effect on the date hereof and described in the Time of Sale Prospectus and the Prospectus or additional equity awards up to the amount described in the Time of Sale Prospectus and the Prospectus or the issuance of shares of Common Stock by the Company (whether upon the exercise of stock options or other equity awards) to employees, officers, directors, advisors or consultants of the Company pursuant to employee benefit plans in effect on the date hereof and described in the Time of Sale Prospectus and the Prospectus or such additional equity awards described in the Time of Sale Prospectus and the Prospectus; *provided* that each recipient of shares of Common Stock or any securities convertible into or exercisable or exchangeable for shares of Common Stock pursuant to this clause (C) shall execute a lock-up agreement substantially in the form of Form 1 of Exhibit A hereto, (D) the filing by the Company of a registration statement on Form S-8 relating to issuance, vesting, exercise or settlement of equity awards granted or to be granted pursuant to any employee benefit plan in effect on the date hereof and described in the Time of

Sale Prospectus or such additional equity awards described in the Time of Sale Prospectus and the Prospectus, (E) the issuance of or entry into an agreement to issue shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock in connection with one or more mergers, acquisitions or securities, businesses, property or other assets, products or technologies, joint ventures, commercial relationships or other strategic corporate transactions or alliances; *provided* that the aggregate amount of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock (on an as-converted, as-exercised or as-exchanged basis) that the Company may issue or agree to issue pursuant to this paragraph shall not exceed 5% of the total number of shares of Common Stock of the Company issued and outstanding immediately following the completion of the transactions contemplated by this Agreement determined on a fully diluted basis, and *provided further*, that each recipient of shares of Common Stock or any securities convertible into or exercisable or exchangeable for shares of Common Stock pursuant to this clause (E) shall execute a lock-up agreement substantially in the form of Form 1 of Exhibit A hereto, (F) facilitating the establishment of a trading plan on behalf of a shareholder, officer or director of the Company pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of Common Stock, *provided* that (i) such plan does not provide for the transfer of shares of Common Stock during the Restricted Period and (ii) to the extent a public announcement or filing under the Exchange Act, if any, is required of or voluntarily made by the Company regarding the establishment of such plan, such announcement or filing shall include a statement to the effect that no transfer of shares of Common Stock may be made under such plan during the Restricted Period, or (G) the issuance by the Company of shares of Common Stock in connection with sales under an “at-the-market” equity offering program pursuant to an Sales Agreements (the “**Sales Agreement**”) between the Company and Wedbush Securities Inc., dated as of May 16, 2023, provided no sales shall be made under the Sales Agreement until the earlier of (i) the exercise in full by the Representatives of their option to purchase Additional Shares or (ii) 30 days after the date hereof.

7. *Covenants of the Underwriters.* Each Underwriter, severally and not jointly, covenants with the Company not to take any action that would result in the Company being required to file with the Commission under Rule 433(d) a free writing prospectus prepared by or on behalf of such Underwriter that otherwise would not be required to be filed by the Company thereunder, but for the action of the Underwriter.

8. Indemnity and Contribution.

(a) The Company agrees to indemnify and hold harmless each Underwriter, each person, if any, who controls any Underwriter within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act, and each affiliate of any Underwriter within the meaning of Rule 405 under the Securities Act from and against any and all losses, claims, damages and liabilities (including, without limitation, any legal or other expenses reasonably incurred in connection with defending or investigating any such action or claim)

that arise out of, or are based upon, any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or any amendment thereof, any preliminary prospectus, the Time of Sale Prospectus or any amendment or supplement thereto, any issuer free writing prospectus as defined in Rule 433(h) under the Securities Act, any Company information that the Company has filed, or is required to file, pursuant to Rule 433(d) under the Securities Act, any “road show” as defined in Rule 433(h) under the Securities Act (a “road show”), the Prospectus or any amendment or supplement thereto, or any Testing-the-Waters Communication or arise out of, or are based upon, any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, except insofar as such losses, claims, damages or liabilities arise out of, or are based upon, any such untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with any information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use therein, it being understood and agreed that the only such information furnished by the Underwriters through the Representatives consists of the information described as such in paragraph (b) below.

(b) Each Underwriter agrees, severally and not jointly, to indemnify and hold harmless the Company, its directors, its officers who sign the Registration Statement and each person, if any, who controls the Company within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act to the same extent as the foregoing indemnity from the Company to such Underwriter, but only with reference to information relating to such Underwriter furnished to the Company in writing by such Underwriter through the Representatives expressly for use in the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, any issuer free writing prospectus, road show, or the Prospectus or any amendment or supplement thereto, it being understood and agreed that the only such information furnished by any Underwriter through the Representatives consists of the following information in the Time of Sale Prospectus and the Prospectus: (i) the concession figure appearing in the fourth paragraph under the caption “Underwriters” and (ii) the sixteenth paragraph under the caption “Underwriters” concerning stabilization.

(c) In case any proceeding (including any governmental investigation) shall be instituted involving any person in respect of which indemnity may be sought pursuant to Section 8(a) or 8(b), such person (the “**indemnified party**”) shall promptly notify the person against whom such indemnity may be sought (the “**indemnifying party**”) in writing and the indemnifying party, upon request of the indemnified party, shall retain counsel reasonably satisfactory to the indemnified party to represent the indemnified party and any others the indemnifying party may designate in such proceeding and shall pay the reasonably incurred and documented fees and disbursements of such counsel related to such proceeding. In any such proceeding, any indemnified party shall have the right to retain its own counsel, but the fees and expenses of such counsel shall be at the expense of

such indemnified party unless (i) the indemnifying party and the indemnified party shall have mutually agreed in writing to the retention of such counsel or (ii) the named parties to any such proceeding (including any impleaded parties) include both the indemnifying party and the indemnified party and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them. It is understood that the indemnifying party shall not, in respect of the legal expenses of any indemnified party in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the fees and expenses of more than one separate firm (in addition to any local counsel) for all such indemnified parties and that all such fees and expenses shall be reimbursed as they are incurred. Such firm shall be designated in writing by the Representatives, in the case of parties indemnified pursuant to Section 8(a), and by the Company, in the case of parties indemnified pursuant to Section 8(b). The indemnifying party shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party from and against any loss or liability by reason of such settlement or judgment. Notwithstanding the foregoing sentence, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel as contemplated by the second and third sentences of this paragraph, the indemnifying party agrees that it shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 30 days after receipt by such indemnifying party of the aforesaid request and (ii) such indemnifying party shall not have reimbursed the indemnified party in accordance with such request prior to the date of such settlement. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement of any pending or threatened proceeding in respect of which any indemnified party is or could have been a party and indemnity could have been sought hereunder by such indemnified party, unless such settlement (x) includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such proceeding and (y) 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.

(d) To the extent the indemnification provided for in Section 8(a) or 8(b) is unavailable to an indemnified party or insufficient in respect of any losses, claims, damages or liabilities referred to therein, then each indemnifying party under such paragraph, in lieu of indemnifying such indemnified party thereunder, shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (i) in such proportion as is appropriate to reflect the relative benefits received by the indemnifying party or parties on the one hand and the indemnified party or parties on the other hand from the offering of the Securities or (ii) if the allocation provided by clause 8(d)(i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause 8(d)(i) above but also the relative fault of the Company on the one hand and of the

Underwriters on the other hand in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the indemnifying party or parties on the one hand and the indemnified party or parties on the other hand in connection with the offering of the Securities shall be deemed to be in the same respective proportions as the net proceeds from the offering of the Securities (after deducting underwriting discounts and commissions but before deducting expenses) received by the Company and the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover of the Prospectus, bear to the aggregate Public Offering Price of the Shares and Public Offering Price per Warrant and the Pre-Funded Warrants. The relative fault of the indemnifying party or parties on the one hand and the indemnified party or parties on the other hand shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or by the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Underwriters' respective obligations to contribute pursuant to this Section 8 are several in proportion to the respective number of Securities they have purchased hereunder, and not joint.

(e) The Company and the Underwriters agree that it would not be just or equitable if contribution pursuant to this Section 8 were determined by *pro rata* allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation that does not take account of the equitable considerations referred to in Section 8(d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages and liabilities referred to in Section 8(d) shall be deemed to include, subject to the limitations set forth above, any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this Section 8, no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Securities underwritten by it and distributed to the public were offered to the public 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. 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. The remedies provided for in this Section 8 are not exclusive and shall not limit any rights or remedies which may otherwise be available to any indemnified party at law or in equity.

(f) The indemnity and contribution provisions contained in this Section 8 and the representations, warranties and other statements of the Company contained in this Agreement shall remain operative and in full force and effect regardless of (i) any termination of this Agreement, (ii) any investigation made by or on behalf of any Underwriter, any person controlling any Underwriter or any affiliate of any Underwriter or by or on behalf of the Company, its officers or directors or any person controlling the Company and (iii) acceptance of and payment for any of the Securities.

9. *Termination.* The Underwriters may terminate this Agreement by notice given by the Representatives to the Company, if after the execution and delivery of this Agreement and prior to or on a Firm Securities Closing Date or any Option Closing Date, as the case may be, (i) trading generally shall have been suspended or materially limited on, or by, as the case may be, any of the New York Stock Exchange, the NYSE American, the NASDAQ Global Market, the Chicago Board of Options Exchange, the Chicago Mercantile Exchange, or the Chicago Board of Trade, (ii) trading of any securities of the Company shall have been suspended on any exchange or in any over-the-counter market, (iii) a material disruption in securities settlement, payment or clearance services in the United States shall have occurred, (iv) any moratorium on commercial banking activities shall have been declared by Federal or New York State authorities or (v) there shall have occurred any outbreak or escalation of hostilities, or any change in financial markets or any calamity or crisis that, in the Representatives' judgment, is material and adverse and which, singly or together with any other event specified in this clause (v), makes it, in the Representatives' judgment, impracticable or inadvisable to proceed with the offer, sale or delivery of the Securities on the terms and in the manner contemplated in the Time of Sale Prospectus or the Prospectus.

10. *Effectiveness; Defaulting Underwriters.* This Agreement shall become effective upon the execution and delivery hereof by the parties hereto.

If, on a Firm Securities Closing Date or an Option Closing Date, as the case may be, any one or more of the Underwriters shall fail or refuse to purchase Securities that it has or they have agreed to purchase hereunder on such date, and the aggregate number of Securities which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase is not more than one-tenth of the aggregate number of the Securities to be purchased on such date, the other Underwriters shall be obligated severally in the proportions that the number of Firm Securities set forth opposite their respective names in Schedule II bears to the aggregate number of Firm Securities set forth opposite the names of all such non-defaulting Underwriters, or in such other proportions as the Representatives may specify, to purchase the Securities which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase on such date; *provided* that in no event shall the number of Securities that any Underwriter has agreed to purchase pursuant to this Agreement be increased pursuant to this Section 10 by an amount in excess of one-ninth of such number of Securities without the written consent of such Underwriter. If, on a Firm Securities Closing Date, any Underwriter or Underwriters shall fail or refuse to purchase Firm Securities and the aggregate number of Firm Securities with respect to which such default occurs is more than one-tenth of the aggregate number of Firm Securities to be purchased on such date, and arrangements satisfactory to the Representatives, the Company for the purchase of such Firm Securities are not made within 36 hours after such default, this Agreement shall terminate without

liability on the part of any non-defaulting Underwriter or the Company. In any such case either the Representatives or the Company shall have the right to postpone a Firm Securities Closing Date, but in no event for longer than seven days, in order that the required changes, if any, in the Registration Statement, in the Time of Sale Prospectus, in the Prospectus or in any other documents or arrangements may be effected. If, on an Option Closing Date, any Underwriter or Underwriters shall fail or refuse to purchase Additional Shares and the aggregate number of Additional Shares with respect to which such default occurs is more than one-tenth of the aggregate number of Additional Shares to be purchased on such Option Closing Date, the non-defaulting Underwriters shall have the option to (i) terminate their obligation hereunder to purchase the Additional Shares to be sold on such Option Closing Date or (ii) purchase not less than the number of Additional Shares that such non-defaulting Underwriters would have been obligated to purchase in the absence of such default. Any action taken under this paragraph shall not relieve any defaulting Underwriter from liability in respect of any default of such Underwriter under this Agreement.

If this Agreement shall be terminated by the Underwriters, or any of them, because of any failure or refusal on the part of the Company to comply with the terms or to fulfill any of the conditions of this Agreement, or if for any reason the Company shall be unable to perform its obligations under this Agreement (other than by reason of a default by the Underwriters), the Company will reimburse the Underwriters or such Underwriters as have so terminated this Agreement with respect to themselves, severally, for all out-of-pocket expenses (including the fees and disbursements of their counsel) reasonably incurred by such Underwriters in connection with this Agreement or the offering contemplated hereunder.

11. *Entire Agreement.* (a) This Agreement, together with any contemporaneous written agreements and any prior written agreements (to the extent not superseded by this Agreement) that relate to the offering of the Securities, represents the entire agreement between the Company, on the one hand, and the Underwriters, on the other, with respect to the preparation of any preliminary prospectus, the Time of Sale Prospectus, the Prospectus, the conduct of the offering, and the purchase and sale of the Securities.

(b) The Company acknowledges that in connection with the offering of the Securities: (i) the Underwriters have acted at arm's length, are not agents of, and owe no fiduciary duties to, the Company or any other person, (ii) the Underwriters owe the Company only those duties and obligations set forth in this Agreement, any contemporaneous written agreements and prior written agreements (to the extent not superseded by this Agreement), if any, (iii) the Underwriters may have interests that differ from those of the Company, and (iv) none of the activities of the Underwriters in connection with the transactions contemplated herein constitutes a recommendation, investment advice, or solicitation of any action by the Underwriters with respect to any entity or natural person. The Company waives to the full extent permitted by applicable law any claims it may have against the Underwriters arising from an alleged breach of fiduciary duty in connection with the offering of the Securities.

12. *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.

For purposes of this Section a “**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. “**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.

13. *Counterparts.* This Agreement may be signed in two or more counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. Counterparts may be delivered via facsimile, electronic mail (including any electronic signature covered by the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act, the Electronic Signatures and Records Act or other applicable law, e.g., www.docuSign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

14. *Applicable Law.* This Agreement shall be governed by and construed in accordance with the internal laws of the State of New York.

15. *Headings.* The headings of the sections of this Agreement have been inserted for convenience of reference only and shall not be deemed a part of this Agreement.

16. *Notices.* All communications hereunder shall be in writing and effective only upon receipt and if to the Underwriters shall be delivered, mailed or sent to the Representatives at the address set forth in Schedule I hereto.

Very truly yours,

TSCAN THERAPEUTICS, INC.

By: /s/ Gavin MacBeath

Name: Gavin MacBeath

Title: Chief Executive Officer

Accepted as of the date hereof

Morgan Stanley & Co. LLC

Acting severally on behalf of itself and the several Underwriters named in Schedule II hereto

By: Morgan Stanley & Co. LLC

By: /s/ Chirag D. Surti

Name: Chirag D. Surti

Title: Executive Director

Accepted as of the date hereof

Wedbush Securities Inc.

Acting severally on behalf of itself and the several Underwriters named in Schedule II hereto

By: Wedbush Securities Inc.

By: /s/ Ben Davey

Name: Ben Davey

Title: Head of ECM

	Morgan Stanley & Co. LLC
Representatives:	Wedbush Securities Inc.
Registration Statement File No.:	333-268260
Time of Sale Prospectus	<ol style="list-style-type: none">1. Prospectus dated May 16, 2023 relating to the Shelf Shares2. The preliminary prospectus supplement dated May 25, 2023 relating to the Shares3. Free writing prospectus filed May 26, 2023
Lock-up Restricted Period:	90 days
Title of Securities to be purchased:	Voting common stock, par value \$0.0001 per share Warrants of the Company to purchase voting common stock, par value \$0.0001 per share, at an exercise price of \$0.0001 per warrant
Number of Firm Shares:	22,989,474
Number of Pre-Funded Warrants:	47,010,526
Number of Additional Shares (Common Stock):	10,500,000
Purchase Price:	\$1.88 a share
Warrant Purchase Price:	\$1.8799 a warrant
Public Offering Price:	\$2.0000 a share
Public Offering Price per Warrant:	\$1.9999 a warrant
Selling Concession for Shares and Pre-Funded Warrants:	\$0.072 a share

Reallowance for Shares and Pre-Funded Warrants: \$0.024 a share

First Closing Date and Time: May 31, 2023 10:00 a.m.

Second Closing Date and Time: June 1, 2023 10:00 a.m.

Closing Location: Davis Polk & Wardwell LLP
450 Lexington Avenue
New York, New York 10017

Address for Notices to Representatives: Morgan Stanley & Co. LLC, 1585 Broadway, 29th Floor, New York, New York 10036,
Attention: Investment Banking Division (fax: (212) 507-8999)

Wedbush Securities Inc., 1000 Wilshire Boulevard, Los Angeles, CA 90017,
fax no. (213) 688-6634,
Attention: Office of the General Counsel / Andrew Druch

Address for Notices to the Company: TScan Therapeutics, Inc.
830 Winter St.
Waltham, MA 02451
Attention: Chief Financial Officer

with copy to (which shall not constitute notice)

TScan Therapeutics, Inc.
830 Winter St.
Waltham, MA 02451
Attention: Chief Legal Officer

SCHEDULE II

<u>Underwriter</u>	<u>Number of Firm Shares To Be Purchased (Common Stock)</u>	<u>Number of Pre- Funded Warrants To Be Purchased</u>
Morgan Stanley & Co. LLC	13,793,684	28,206,316
Wedbush Securities Inc.	9,195,790	18,804,210
Total:	22,989,474	47,010,526

Lock-Up Form 1

Brian Silver, J.D.

Gavin MacBeath, Ph.D.

Debora Barton, M.D.

Zoran Zdraveski, J.D., Ph.D.

Timothy Barberich

Stephen Biggar, M.D., Ph.D.

Katina Dorton, J.D., M.B.A.

Gabriela Gruia, M.D.

Ittai Harel

Barbara Klencke

Lock-Up Form 2

Pitango HealthTech Fund I, L.P.

Pitango HealthTech Fund I—Israel L.P.

Pitango HealthTech Principals Fund I, L.P.

Relationship to Company

Director or executive officer

Director or executive officer

Director or executive officer

Director or executive officer

Director or executive officer

Director or executive officer

Director or executive officer

Director or executive officer

Director or executive officer

Director or executive officer

Relationship to Company

Affiliated shareholder

Affiliated shareholder

Affiliated shareholder

FORMS OF LOCK-UP AGREEMENT

FORM 1

[], 2023

Morgan Stanley & Co. LLC

c/o Morgan Stanley & Co. LLC
1585 Broadway
New York, New York 10036

Ladies and Gentlemen:

The undersigned understands that Morgan Stanley & Co. LLC, as representative of the offering (the “**Representative**”) proposes to enter into an Underwriting Agreement (the “**Underwriting Agreement**”) with TScan Therapeutics, Inc., a Delaware corporation (the “**Company**”), providing for the public offering (the “**Public Offering**”) by the several Underwriters, including the Representative (the “**Underwriters**”), of (a) shares (the “**Shares**”) of the voting common stock, par value \$0.0001 per share, of the Company and the non-voting common stock, par value \$0.0001 per share, of the Company (the “**Common Stock**”) and (b) pre-funded warrants to purchase shares of the Company’s voting common stock, par value \$0.0001 per share of the Company (the “**Pre-Funded Warrants**” and, together with the Shares, the “**Securities**”), at an exercise price of \$0.0001.

To induce the Underwriters that may participate in the Public Offering to continue their efforts in connection with the Public Offering, the undersigned hereby agrees that, without the prior written consent of the Representative on behalf of the Underwriters, it will not, and will not publicly disclose an intention to, during the period commencing on the date of the first public filing of a preliminary prospectus supplement relating to the Public Offering and ending 90 days after the date of the final prospectus supplement (the “**Restricted Period**”) relating to the Public Offering (the “**Prospectus**”), (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock beneficially owned (as such term is used in Rule 13d-3 of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), by the undersigned or any other securities so owned convertible into or exercisable or exchangeable for Common Stock or (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Common Stock, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise. The foregoing sentence shall not apply to (a) transactions relating to shares of Common Stock or other securities acquired in the Public Offering if the undersigned is not an officer or director of the Company or

in open market transactions after the completion of the Public Offering, *provided* that no filing under Section 16(a) of the Exchange Act shall be required or shall be voluntarily made in connection with subsequent sales of Common Stock or other securities acquired in such transactions, (b) transfers of shares of Common Stock or any security convertible into Common Stock as a bona fide gift, (c) distributions of shares of Common Stock or any security convertible into Common Stock to limited partners or stockholders of the undersigned; (d) transfers or dispositions, to any immediate family member; *provided* that (i) in the case of any transfer or distribution pursuant to clause (b), (c) or (d), each donee, legatee, heir, distributee or other transferee shall sign and deliver a lock-up letter substantially in the form of this letter and (ii) in the case of any transfer or distribution pursuant to clause (a), (b), (c) or (d), no filing under Section 16(a) of the Exchange Act, reporting a reduction in beneficial ownership of shares of Common Stock, shall be required or shall be voluntarily made during the Restricted Period (for the avoidance of doubt, except in the case of clause (b) where certain filings under Section 16(a) of the Exchange Act are required, *provided* that any such required filing indicates that any such transfer was made by means of a bona fide gift); (e) transfers or dispositions by will or intestacy; (f) transfers or dispositions pursuant to a court order or a settlement agreement related to the distribution of assets in connection with the dissolution of a marriage or civil union, *provided* that in the case of any transfer or distribution pursuant to clause (e) or (f), (i) each donee, legatee, heir, distributee or other transferee shall sign and deliver a lock-up letter substantially in the form of this letter, and (ii) any required filing under Section 16(a) of the Exchange Act shall indicate in the footnotes thereto that the filing relates to the circumstances described in this clause and no other public announcement shall be required or shall be made voluntarily in connection with such transfer, disposition or distribution; (g) transfers or dispositions to the Company in connection with the exercise or settlement of options, warrants or other rights to acquire shares of Common Stock or any security convertible into or exercisable for shares of Common Stock in accordance with their terms (including the vesting or settlement of restricted stock units and including, in each case, by way of net exercise and/or to cover withholding tax obligations in connection with such exercise, vesting or settlement) pursuant to an employee benefit plan, option, warrant or other right disclosed in the final prospectus for the Public Offering, *provided* that (i) any such shares issued upon exercise of such option, warrant, restricted stock unit or other right shall be subject to the restrictions set forth herein, and (ii) any filing under Section 16(a) of the Exchange Act reporting a reduction in beneficial ownership shall indicate in the footnotes thereto that the filing relates to the applicable circumstances described in this clause, and no other public announcement shall be required or shall be made voluntarily in connection with such transfer; or (h) the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of Common Stock, *provided* that (i) such plan does not provide for the transfer of Common Stock during the Restricted Period and (ii) to the extent a public announcement or filing under the Exchange Act, if any, is required of or voluntarily made by or on behalf of the undersigned or the Company regarding the establishment of such plan, such announcement or filing shall include a statement to the effect that no transfer of Common Stock may be made under such plan during the Restricted Period. For purposes of this letter, “immediate family” shall mean any relationship by blood, marriage or adoption, not more remote than first cousin. In addition, the undersigned

agrees that, without the prior written consent of the Representative on behalf of the Underwriters, it will not, during the Restricted Period, make any demand for or exercise any right with respect to, the registration of any shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock, under the Company's Amended and Restated Investors' Rights Agreement dated as of January 15, 2021 or otherwise. The undersigned acknowledges and agrees that the foregoing precludes the undersigned from engaging in any hedging or other transaction designed or intended, or which could reasonably be expected to lead to or result in, a sale or disposition of any shares of Common Stock, or any securities convertible into or exercisable or exchangeable for Common Stock, even if any such sale or disposition transaction or transactions would be made or executed by or on behalf of someone other than the undersigned. 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.

Further, this letter shall not restrict any sale, disposal or transfer of the undersigned's shares of Common Stock to a bona fide third party pursuant to a tender offer for securities of the Company or any merger, consolidation or other business combination involving a Change of Control (as defined below) of the Company occurring after the settlement of the Public Offering, that, in each case, has been approved by the board of directors of the Company; *provided* that all of the undersigned's shares of Common Stock subject to this letter that are not so transferred, sold, tendered or otherwise disposed of remain subject to this letter; and *provided, further*, that it shall be a condition of transfer, sale, tender or other disposition that if such tender offer or other transaction is not completed, any of the undersigned's shares of Common Stock subject to this letter shall remain subject to the restrictions on transfer set forth herein. For the purposes of this paragraph, "**Change of Control**" means the consummation of any bona fide third party tender offer, merger, consolidation or other similar transaction, the result of which is that any "person" (as defined in Section 13(d)(3) of the Exchange Act), or group of persons, other than the Company or its subsidiaries, becomes the beneficial owner (as defined in Rules 13d-3 and 13d-5 of the Exchange Act) of at least 75% of the total voting power of the voting share capital of the Company.

In the event that (i) the Representative releases, in full or in part, any (x) director of the Company, (y) executive officer of the Company or (z) stockholder holding five percent (5%) or more of the outstanding shares of Common Stock of the Company (each such director, executive officer or stockholder, a "Triggering Shareholder") from the restrictions of any lock-up agreement similar to this agreement signed by such Triggering Shareholder for the benefit of any Underwriter in connection with the Public Offering and (ii) such release or series of releases cumulatively relates to more than three percent (3%) or more of the outstanding shares of Common Stock (as adjusted for any stock dividend, stock split, combination of shares, reclassification, recapitalization or other similar event) held by the Triggering Shareholder ((i) and (ii) together, a "**Triggering Release**"), then the undersigned shall be automatically released from the terms of this letter to the same extent, with respect to the same percentage of Company securities of the undersigned as the percentage of Company securities being released in the Triggering

Release represent with respect to the Company securities held by the Triggering Shareholder (calculated as a percentage of the total outstanding shares of Common Stock held by the Triggering Shareholder) at the time of the request of the Triggering Release. In the event of a Triggering Release, the Company shall use commercially reasonable efforts to promptly notify the undersigned of the occurrence of each such Triggering Release. Notwithstanding the foregoing, (1) the provisions of this paragraph will not apply if the release or waiver is effected (A) solely to permit a transfer not involving a disposition for value and if the transferee agrees in writing to be bound by the same terms described in this letter to the extent and for the duration that such terms remain in effect at the time of transfer or (B) in the case of a natural person, due to circumstances of a bona fide emergency or hardship, as determined by the Representative in its sole judgment, and (2) if the release or waiver is in connection with any secondary underwritten public offering of Shares (including a secondary underwritten public offering with a primary component) (an “**Underwritten Sale**”), then such waiver or release shall only apply with respect to, and to the extent of, the undersigned’s participation in such Underwritten Sale, *provided* that, if the undersigned has a contractual right to “piggyback” on a registration statement filed by the Company for the offer and sale of Common Stock in an Underwritten Sale, the undersigned is offered the opportunity to participate in the secondary component of any such Underwritten Sale pursuant to such contractual rights.

The undersigned acknowledges and agrees that the Underwriters have not provided any recommendation or investment advice nor have the Underwriters solicited any action from the undersigned with respect to the Public Offering of the Securities and the undersigned has consulted their own legal, accounting, financial, regulatory and tax advisors to the extent deemed appropriate. The undersigned further acknowledges and agrees that, although the Underwriters may provide certain Regulation Best Interest and Form CRS disclosures or other related documentation to you in connection with the Public Offering, the Underwriters are not making a recommendation to you to participate in the Public Offering or sell any Securities at the price determined in the Public Offering, and nothing set forth in such disclosures or documentation is intended to suggest that any Underwriter is making such a recommendation.

The undersigned understands that the Company and the Underwriters are relying upon this agreement in proceeding toward consummation of the Public Offering. The undersigned further understands that this agreement is irrevocable and shall be binding upon the undersigned’s heirs, legal representatives, successors and assigns.

The undersigned understands that, if (i) the Representative, on the one hand, or the Company, on the other hand, informs the other in writing, prior to the execution of the Underwriting Agreement, that it has determined not to proceed with the Public Offering, (ii) the Underwriting Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated prior to payment for and delivery of the securities to be sold thereunder, (iii) the registration statement related to the Public Offering is withdrawn prior to execution of the Underwriting Agreement or (iv) the Underwriting Agreement is not executed on or before May 26, 2023 (which date may be extended for an additional three months by the Company upon written notice to the undersigned), then, in each case, this letter shall automatically, and without any action on the part of any other party, be of no further force and effect, and the undersigned shall be automatically released from all obligations under this letter.

This agreement and any claim, controversy or dispute arising under or related to this agreement shall be governed by and construed in accordance with the laws of the State of New York.

Whether or not the Public Offering actually occurs depends on a number of factors, including market conditions. Any Public Offering will only be made pursuant to an Underwriting Agreement, the terms of which are subject to negotiation between the Company and the Underwriters.

Very truly yours,

(Name)

(Address)

Morgan Stanley & Co. LLC

c/o Morgan Stanley & Co. LLC
1585 Broadway
New York, New York 10036

Ladies and Gentlemen:

The undersigned understands that Morgan Stanley & Co. LLC, as representative of the offering (the "**Representative**") proposes to enter into an Underwriting Agreement (the "**Underwriting Agreement**") with TScan Therapeutics, Inc., a Delaware corporation (the "**Company**"), providing for the public offering (the "**Public Offering**") by the several Underwriters, including the Representative (the "**Underwriters**"), of (a) shares (the "**Shares**") of the voting common stock, par value \$0.0001 per share, of the Company and the non-voting common stock, par value \$0.0001 per share, of the Company (the "**Common Stock**") and (b) pre-funded warrants to purchase shares of the Company's voting common stock, par value \$0.0001 per share of the Company (the "**Pre-Funded Warrants**") and, together with the Shares, the "**Securities**"), at an exercise price of \$0.0001.

To induce the Underwriters that may participate in the Public Offering to continue their efforts in connection with the Public Offering, the undersigned hereby agrees that, without the prior written consent of the Representative on behalf of the Underwriters, it will not, and will not publicly disclose an intention to, during the period commencing on the date of the first public filing of a preliminary prospectus supplement relating to the Public Offering and ending 90 days after the date of the final prospectus supplement (the "**Restricted Period**") relating to the Public Offering (the "**Prospectus**"), (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock beneficially owned (as such term is used in Rule 13d-3 of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**")) by the undersigned or any other securities so owned convertible into or exercisable or exchangeable for Common Stock (collectively, the "**Lock-up Securities**") or (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Lock-up Securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise. The foregoing sentence shall not apply to:

(a) transactions relating to shares of Common Stock or other securities acquired in the Public Offering if the undersigned is not an officer or director of the Company or in open market transactions after the completion of the Public Offering,

(b) transfers as a bona fide gift,

(c) transfers or distributions to (1) direct or indirect limited partners, members, stockholders, or holders of similar equity interests of the undersigned (or in each case its nominee or custodian), (2) to another corporation, partnership, limited liability company, trust or other business entity (or in each case its nominee or custodian) that is an affiliate (as defined in Rule 405 promulgated under the Securities Act of 1933, as amended) of the undersigned, or (3) to any investment fund or other entity controlled or managed by the undersigned or affiliates of the undersigned;

(d) transfers or dispositions to any immediate family member; *provided* that (i) in the case of any transfer or distribution pursuant to clause (b), (c) or (d), each donee, legatee, heir, distributee or other transferee shall sign and deliver a lock-up letter substantially in the form of this letter, and (ii) in the case of any transfer or distribution pursuant to clause (a), (b), (c) or (d), no filing under Section 16(a) of the Exchange Act, reporting a reduction in beneficial ownership of shares of Common Stock, shall be required or shall be voluntarily made during the Restricted Period (for the avoidance of doubt, except in the case of clause (b) where certain filings under Section 16(a) of the Exchange Act are required, provided that any such required filing indicates that any such transfer was made by means of a bona fide gift);

(e) transfers or dispositions by will or intestacy;

(f) transfers or dispositions pursuant to a court order or a settlement agreement related to the distribution of assets in connection with the dissolution of a marriage or civil union, *provided* that in the case of any transfer or distribution pursuant to clause (e) or (f), (i) each donee, legatee, heir, distributee or other transferee shall sign and deliver a lock-up letter substantially in the form of this letter, and (ii) any required filing under Section 16(a) of the Exchange Act shall indicate in the footnotes thereto that the filing relates to the circumstances described in this clause and no other public announcement shall be required or shall be made voluntarily in connection with such transfer, disposition or distribution;

(g) transfers or dispositions to the Company in connection with the exercise or settlement of options, warrants or other rights to acquire shares of Common Stock or any security convertible into or exercisable for shares of Common Stock in accordance with their terms (including the vesting or settlement of restricted stock units and including, in each case, by way of net exercise and/or to cover withholding tax obligations in connection with such exercise, vesting or settlement) pursuant to an employee benefit plan, option, warrant or other right disclosed in the final prospectus for the Public Offering, *provided* that (i) any such shares issued upon exercise of such option, warrant, restricted stock unit or other right shall be subject to the restrictions set forth herein, and (ii) any filing under Section 16(a) of the Exchange Act reporting a reduction in beneficial ownership shall indicate in the footnotes thereto that the filing relates to the applicable circumstances described in this clause, and no other public announcement shall be required or shall be made voluntarily in connection with such transfer; or

(h) the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of Common Stock, *provided* that (i) such plan does not provide for the transfer of Common Stock during the Restricted Period and (ii) to the extent a public announcement or filing under the Exchange Act, if any, is required of or voluntarily made by or on behalf of the undersigned or the Company regarding the establishment of such plan, such announcement or filing shall include a statement to the effect that no transfer of Common Stock may be made under such plan during the Restricted Period.

For purposes of this letter, “immediate family” shall mean any relationship by blood, marriage or adoption, not more remote than first cousin. In addition, the undersigned agrees that, without the prior written consent of the Representative on behalf of the Underwriters, it will not, during the Restricted Period, make any demand for or exercise any right with respect to, the registration of any shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock, under the Company’s Amended and Restated Investors’ Rights Agreement dated as of January 15, 2021 or otherwise. The undersigned acknowledges and agrees that, subject to the foregoing, the undersigned is precluded from engaging in any hedging or other transaction designed or intended, or which could reasonably be expected to lead to or result in, a sale or disposition of any Lock-up Securities, even if any such sale or disposition transaction or transactions would be made or executed by or on behalf of someone other than the undersigned. 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.

Further, this letter shall not restrict any sale, disposal or transfer of the undersigned’s shares of Common Stock to a bona fide third party pursuant to a tender offer for securities of the Company or any merger, consolidation or other business combination involving a Change of Control (as defined below) of the Company occurring after the settlement of the Public Offering, that, in each case, has been approved by the board of directors of the Company; *provided* that all of the undersigned’s shares of Common Stock subject to this letter that are not so transferred, sold, tendered or otherwise disposed of remain subject to this letter; and *provided, further*, that it shall be a condition of transfer, sale, tender or other disposition that if such tender offer or other transaction is not completed, any of the undersigned’s shares of Common Stock subject to this letter shall remain subject to the restrictions on transfer set forth herein. For the purposes of this paragraph, “**Change of Control**” means the consummation of any bona fide third party tender offer, merger, consolidation or other similar transaction, the result of which is that any “person” (as defined in Section 13(d)(3) of the Exchange Act), or group of persons, other than the Company or its subsidiaries, becomes the beneficial owner (as defined in Rules 13d-3 and 13d-5 of the Exchange Act) of at least 50% of the total voting power of the voting share capital of the Company.

In the event that (i) the Representative releases, in full or in part, any (x) director of the Company, (y) executive officer of the Company or (z) stockholder holding two percent (2%) or more of the outstanding shares of Common Stock of the Company (each such director, executive officer or stockholder, a “Triggering Shareholder”) from the restrictions of any lock-up agreement similar to this agreement signed by such Triggering Shareholder for the benefit of any Underwriter in connection with the Public Offering (including, without limitation, releases from the agreement not to make any demand with respect to the registration of Common Stock) and (ii) such release or series of releases cumulatively relates to more than one percent (1%) or more of the outstanding shares of Common Stock (as adjusted for any stock dividend, stock split, combination of shares, reclassification, recapitalization or other similar event) held by such Triggering Shareholder ((i) and (ii) together, a “**Triggering Release**”), then the undersigned shall be automatically released from the terms of this letter to the same extent, with respect to the same percentage of Company securities of the undersigned as the percentage of Company securities being released in the Triggering Release represent with respect to the Company securities held by such Triggering Shareholder (calculated as a percentage of the total outstanding shares of Common Stock held by such Triggering Shareholder) at the time of the request of the Triggering Release. In the event of a Triggering Release, (i) the Representative shall use commercially reasonable efforts to notify the Company within two (2) business days of each such Triggering Release, *provided* that the failure to give such notice shall not give rise to any claim or liability against the Representative, and (2) the Company shall, in turn, use commercially reasonable efforts to promptly notify the undersigned of the occurrence of each such Triggering Release. Notwithstanding the foregoing, (1) the provisions of this paragraph will not apply if the release or waiver is effected (A) solely to permit a transfer not involving a disposition for value and if the transferee agrees in writing to be bound by the same terms described in this letter to the extent and for the duration that such terms remain in effect at the time of transfer or (B) in the case of a natural person, due to circumstances of a bona fide emergency or hardship, as determined by the Representative in its sole judgment, and (2) if the release or waiver is in connection with any secondary underwritten public offering of Shares (including a secondary underwritten public offering with a primary component) (an “**Underwritten Sale**”), then such waiver or release shall only apply with respect to, and to the extent of, the undersigned’s participation in such Underwritten Sale, *provided* that, if the undersigned has a contractual right to “piggyback” on a registration statement filed by the Company for the offer and sale of Common Stock in an Underwritten Sale, the undersigned is offered the opportunity to participate in the secondary component of any such Underwritten Sale pursuant to such contractual rights.

The undersigned acknowledges and agrees that the Underwriters have not provided any recommendation or investment advice nor have the Underwriters solicited any action from the undersigned with respect to the Public Offering of the Securities and the undersigned has consulted their own legal, accounting, financial, regulatory and tax advisors to the extent deemed appropriate. The undersigned further acknowledges and agrees that, although the Underwriters may provide certain Regulation Best Interest and Form CRS disclosures or other related documentation to you in connection with the Public Offering, the Underwriters are not making a recommendation to you to participate in the Public Offering or sell any Securities at the price determined in the Public Offering, and nothing set forth in such disclosures or documentation is intended to suggest that any Underwriter is making such a recommendation.

The undersigned understands that the Company and the Underwriters are relying upon this agreement in proceeding toward consummation of the Public Offering. The undersigned further understands that this agreement is irrevocable and shall be binding upon the undersigned's heirs, legal representatives, successors and assigns.

The undersigned understands that, if (i) the Representative, on the one hand, or the Company, on the other hand, informs the other in writing, prior to the execution of the Underwriting Agreement, that it has determined not to proceed with the Public Offering, (ii) the Underwriting Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated prior to payment for and delivery of the securities to be sold thereunder, (iii) the registration statement related to the Public Offering is withdrawn prior to execution of the Underwriting Agreement or (iv) the Underwriting Agreement is not executed on or before May 26, 2023 (which date may be extended on one occasion for an additional three months by the Company upon written notice to the undersigned), then, in each case, this letter shall automatically, and without any action on the part of any other party, be of no further force and effect, and the undersigned shall be automatically released from all obligations under this letter.

This agreement and any claim, controversy or dispute arising under or related to this agreement shall be governed by and construed in accordance with the laws of the State of New York.

Whether or not the Public Offering actually occurs depends on a number of factors, including market conditions. Any Public Offering will only be made pursuant to an Underwriting Agreement, the terms of which are subject to negotiation between the Company and the Underwriters.

Very truly yours,

(Name)

(Address)

TSCAN THERAPEUTICS, INC.

FORM OF PRE-FUNDED WARRANT TO PURCHASE COMMON STOCK

Number of Shares: []
 (subject to adjustment)

Warrant No. __

Original Issue Date: [], 2023

TScan Therapeutics, Inc., a Delaware corporation (the “**Company**”), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, [] or its registered assigns (the “**Holder**”), is entitled, subject to the terms set forth below, to purchase from the Company up to a total of [] shares of voting common stock, \$0.0001 par value per share (the “**Common Stock**”), of the Company (each such share, a “**Warrant Share**” and all such shares, the “**Warrant Shares**”) at an exercise price per share equal to \$0.0001 per share (as adjusted from time to time as provided in Section 9 herein, the “**Exercise Price**”), upon surrender of this Warrant to Purchase Common Stock (including any Warrants to Purchase Common Stock issued in exchange, transfer or replacement hereof, the “**Warrant**”) at any time and from time to time on or after the date hereof (the “**Original Issue Date**”), subject to the following terms and conditions:

1. *Definitions.* For purposes of this Warrant, the following terms shall have the following meanings:

(a) “**Affiliate**” means any Person directly or indirectly controlled by, controlling or under common control with, a Holder, but only for so long as such control shall continue. For purposes of this definition, “control” (including, with correlative meanings, “controlled by”, “controlling” and “under common control with”) means, with respect to a Person, possession, direct or indirect, of (a) the power to direct or cause direction of the management and policies of such Person (whether through ownership of securities or partnership or other ownership interests, by contract or otherwise), or (b) at least 50% of the voting securities (whether directly or pursuant to any option, warrant or other similar arrangement) or other comparable equity interests of such Person.

(b) “**Attribution Parties**” means, collectively, the following Persons and entities: (i) any direct or indirect Affiliates of the Holder, (ii) any Person acting or who could be deemed to be acting as a Section 13(d) “group” together with the Holder or any Attribution Parties and (iii) any other Persons whose beneficial ownership of the Company’s Common Stock would or could be aggregated with the Holder’s and/or any other Attribution Parties for purposes of Section 13(d) or Section 16 of the Exchange Act. For clarity, the purpose of the foregoing is to subject collectively the Holder and all other Attribution Parties to the Maximum Percentage.

(c) “**Commission**” means the United States Securities and Exchange Commission.

(d) “**Closing Sale Price**” means, for any security as of any date, the last trade price for such security on the Principal Trading Market for such security, as reported by Bloomberg Financial Markets, or, if such Principal Trading Market begins to operate on an extended hours basis and does not designate the last trade price, then the last trade price of such security prior to 4:00 P.M., New York City time, as reported by Bloomberg Financial Markets, or if the foregoing do not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg Financial Markets. If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then the Board of Directors of the Company shall use its good faith judgment to determine the fair market value. The Board of Directors’ determination shall be binding upon all parties absent demonstrable error. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during the applicable calculation period.

(e) “**Exchange Act**” means the Securities Exchange Act of 1934, as amended.

(f) “**Group**” shall have the meaning ascribed to it in Section 13(d) of the Exchange Act, and all related rules, regulations and jurisprudence.

(f) “**Person**” means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

(g) “**Principal Trading Market**” means the national securities exchange or other trading market on which the Common Stock is primarily listed on and quoted for trading, which, as of the Original Issue Date, shall be the Nasdaq Global Market.

(h) “**Registration Statement**” means the Company’s Registration Statement on Form S-3 (File No. 333-268260), declared effective on May 16, 2023.

(i) “**Securities Act**” means the Securities Act of 1933, as amended.

(j) “**Standard Settlement Period**” means the standard settlement period, expressed in a number of Trading Days, for the Principal Trading Market with respect to the Common Stock that is in effect on the date of delivery of an applicable Exercise Notice, which as of the Issuance Date was “T+2.”

(k) “**Trading Day**” means any weekday on which the Principal Trading Market is normally open for trading.

(l) “**Transfer Agent**” means Computershare Trust Company, N.A., the Company’s transfer agent and registrar for the Common Stock, and any successor appointed in such capacity.

2. Issuance of Securities; Registration of Warrants. The Warrant, as initially issued by the Company, is offered and sold pursuant to the Registration Statement. As of the Original Issue Date, the Warrant Shares are issuable under the Registration Statement. Accordingly, the Warrant and, assuming issuance pursuant to the Registration Statement or an exchange meeting the requirements of Section 3(a)(9) of the Securities Act as in effect on the Original Issue Date, the Warrant Shares, are not “restricted securities” under Rule 144 promulgated under the Securities Act. The Company shall register ownership of this Warrant, upon records to be maintained by the Company for that purpose (the “**Warrant Register**”), in the name of the record Holder (which shall include the initial Holder or, as the case may be, any assignee to which this Warrant is permissibly assigned hereunder) from time to time. The Company may 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.

3. Registration of Transfers. Subject to compliance with all applicable securities laws, the Company shall, or will cause its Transfer Agent to, register the transfer of all or any portion of this Warrant in the Warrant Register, upon surrender of this Warrant, and payment for all applicable transfer taxes (if any). Upon any such registration or transfer, a new warrant to purchase Common Stock in substantially the form of this Warrant (any such new warrant, a “**New Warrant**”) evidencing the portion of this Warrant so transferred shall be issued to the transferee, and a New Warrant evidencing the remaining portion of this Warrant not so transferred, if any, shall be issued to the transferring Holder. The acceptance of the New Warrant by the transferee thereof shall be deemed the acceptance by such transferee of all of the rights and obligations in respect of the New Warrant that the Holder has in respect of this Warrant. The Company shall, or will cause its Transfer Agent to, prepare, issue and deliver at the Company’s own expense any New Warrant under this Section 3. Until due presentment for registration of transfer, the Company may treat the registered Holder hereof as the owner and holder for all purposes, and the Company shall not be affected by any notice to the contrary.

4. Exercise of Warrants.

(a) All or any part of this Warrant shall be exercisable by the registered Holder in any manner permitted by this Warrant (including Section 11) at any time and from time to time on or after the Original Issue Date, and such rights shall not expire.

(b) The Holder may exercise this Warrant by delivering to the Company (i) an exercise notice, in the form attached as Schedule 1 hereto (the “**Exercise Notice**”), completed and duly signed, and (ii) payment of the Exercise Price for the number of Warrant Shares as to which this Warrant is being exercised (which may take the form of a “cashless exercise” if so indicated in the Exercise Notice pursuant to Section 10 below), and the date on which the last of such items is delivered to the Company (as determined in accordance with the notice provisions hereof) is an “**Exercise Date.**” The Holder shall not be required to deliver the original Warrant in order to effect an exercise hereunder. Execution and delivery of the Exercise Notice shall have the same effect as cancellation of the original Warrant and issuance of a New Warrant evidencing the right to purchase the remaining number of Warrant Shares, if any.

5. Delivery of Warrant Shares.

(a) Upon exercise of this Warrant, the Company shall promptly (but in no event later than the number of Trading Days comprising the Standard Settlement Period following the Exercise Date), upon the request of the Holder, credit such aggregate number of shares of Common Stock specified by the Holder in the Exercise Notice and to which the Holder is entitled pursuant to such exercise (the “**Exercise Shares**”) to the Holder’s or its designee’s balance account

with The Depository Trust Company (“DTC”) through its Deposit Withdrawal At Custodian system, if the Transfer Agent is then a participant in the DTC Fast Automated Securities Transfer Program (the “FAST Program”) and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or the resale of such Warrant Shares by the Holder or (B) the Exercise Shares are eligible for resale by the Holder without volume or manner-of-sale restrictions pursuant to Rule 144 promulgated under the Securities Act (assuming cashless exercise of this Warrant). If the Transfer Agent is not a member of the FAST Program or if (A) and (B) above are not true, the Transfer Agent will either (i) record the Exercise Shares in the name of the Holder or its designee on the certificates reflecting the Exercise Shares with an appropriate legend regarding restriction on transferability, which shall be issued and dispatched by overnight courier to the address as specified in the Exercise Notice, and on the Company’s share register or (ii) issue such Exercise Shares in the name of the Holder or its designee in restricted book-entry form in the Company’s share register. The Holder, or any natural person or legal entity (each, a “Person”) so designated by the Holder to receive Warrant Shares, shall be deemed to have become the holder of record of such Warrant Shares as of the Exercise Date, irrespective of the date such Warrant Shares are credited to the Holder’s DTC account, the date of the book entry positions or the date of delivery of the certificates evidencing such Exercise Shares, as the case may be.

(b) If the Company fails to deliver to the Holder or its designee Exercise Shares in the manner required pursuant to Section 5(a) within the Standard Settlement Period following the Exercise Date and the Holder purchases (in an open market transaction or otherwise) 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”) but did not receive within the Standard Settlement Period, then the Company shall, within two (2) Trading Days after the Holder’s request and in the Holder’s sole discretion, promptly honor its obligation to deliver to the Holder or its designee the Exercise Shares pursuant to Section 5(a) and pay cash to the Holder in an amount equal to the excess (if any) of Holder’s total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased in the Buy-In, less the product of (A) the number of shares of Common Stock purchased in the Buy-In, times (B) the Closing Sale Price of a share of Common Stock on the Exercise Date.

(c) To the extent permitted by law and subject to Section 5(b), the Company’s obligations to issue and deliver Warrant Shares in accordance with and subject to the terms hereof (including the limitations set forth in Section 11 below) are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by the Holder or any other Person of any obligation to the Company or any violation or alleged violation of law by the Holder or any other Person, and irrespective of any other circumstance that might otherwise limit such obligation of the Company to the Holder in connection with the issuance of Warrant Shares. Subject to Section 5(b), nothing herein shall limit the 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.

6. *Charges, Taxes and Expenses.* Issuance and delivery for shares of Common Stock upon exercise of this Warrant shall be made without charge to the Holder for any issue or transfer tax, transfer agent fee or other incidental tax or expense (excluding any applicable stamp duties) in respect of the issuance of such certificates, all of which taxes and expenses shall be paid by the Company; *provided, however,* that the Company shall not be required to pay any tax that may be payable in respect of any transfer involved in the registration of any Warrant Shares or the Warrants in a name other than that of the Holder or an Affiliate thereof. The Holder shall be responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving Warrant Shares upon exercise hereof.

7. *Replacement of Warrant.* If this Warrant is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation hereof, or in lieu of and substitution for this Warrant, a New Warrant, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction (in such case) and, in each case, a customary and reasonable contractual indemnity, if requested by the Company. If a New Warrant is requested as a result of a mutilation of this Warrant, then the Holder shall deliver such mutilated Warrant to the Company as a condition precedent to the Company’s obligation to issue the New Warrant.

8. *Reservation of Warrant Shares.* The Company covenants that it will, at all times while this Warrant is outstanding, reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of this Warrant as herein provided, the number of Warrant Shares that are initially issuable and deliverable upon the exercise of this entire Warrant, free

from preemptive rights or any other contingent purchase rights of persons other than the Holder (taking into account the adjustments and restrictions of [Section 9](#)). The Company covenants that all Warrant Shares so issuable and deliverable shall, upon issuance and the payment of the applicable Exercise Price in accordance with the terms hereof, be duly and validly authorized, issued and fully paid and non-assessable. The Company will take all such action as may be reasonably necessary to assure that such shares of Common Stock may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of any securities exchange or automated quotation system upon which the Common Stock may be listed. The Company further covenants that it will not, without the prior written consent of the Holder, take any actions to increase the par value of the Common Stock at any time while this Warrant is outstanding.

9. *Certain Adjustments.* The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this [Section 9](#).

(a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding, (i) pays a stock dividend on its Common Stock or otherwise makes a distribution on any class of capital stock issued and outstanding on the Original Issue Date and in accordance with the terms of such stock on the Original Issue Date or as amended, that is payable in shares of Common Stock, (ii) subdivides its outstanding shares of Common Stock into a larger number of shares of Common Stock, (iii) combines its outstanding shares of Common Stock into a smaller number of shares of Common Stock or (iv) issues by reclassification of shares of capital stock any additional shares of Common Stock of the Company, then in each such case the Exercise Price shall be multiplied by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately before such event and the denominator of which shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution, provided, however, that if such record date shall have been fixed and such dividend is not fully paid on the date fixed therefor, the Exercise Price shall be recomputed accordingly as of the close of business on such record date and thereafter the Exercise Price shall be adjusted pursuant to this paragraph as of the time of actual payment of such dividends. Any adjustment pursuant to clause (ii), (iii) or (iv) of this paragraph shall become effective immediately after the effective date of such subdivision or combination or reclassification, as the case may be.

(b) Pro Rata Distributions. If, on or after the Original Issue Date, the Company shall declare or make any dividend or other pro rata 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, options, evidence of indebtedness or any other assets by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction, but, for the avoidance of doubt, excluding any distribution of shares of Common Stock subject to [Section 9\(a\)](#), any distribution of Purchase Rights (as defined below) subject to [Section 9\(c\)](#) and any Fundamental Transaction (as defined below) subject to [Section 9\(d\)](#)) (a “**Distribution**”) 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 or restrictions on exercise of this Warrant, including without limitation, the Maximum Percentage (as defined below)) immediately before the date on which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, that to the extent that the Holder’s right to participate in any such Distribution would result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, then the Holder shall not be entitled to participate in such Distribution to such extent (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such Distribution (and beneficial ownership) to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time or times as its right thereto would not result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be granted such Distribution (and any Distributions declared or made on such initial Distribution or on any subsequent Distribution held similarly in abeyance) to the same extent as if there had been no such limitation).

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

the Maximum Percentage) 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 Common Stock are to be determined for the grant, issuance or sale of such Purchase Rights (provided, that to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, then the Holder shall not be entitled to participate in such Purchase Right to such extent (and shall not be entitled to beneficial ownership of such Common Stock as a result of such Purchase Right (and beneficial ownership) to such extent) and such Purchase Right to such extent shall be held in abeyance for the benefit of the Holder until such time or times as its right thereto would not result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be granted such right (and any Purchase Right granted, issued or sold on such initial Purchase Right or on any subsequent Purchase Right to be held similarly in abeyance) to the same extent as if there had been no such limitation). As used in this Section 9(c), (i) "**Options**" means any rights, warrants or options to subscribe for or purchase shares of Common Stock or Convertible Securities and (ii) "**Convertible Securities**" mean any stock or securities (other than Options) directly or indirectly convertible into or exercisable or exchangeable for shares of Common Stock.

(d) **Fundamental Transactions.** If, at any time while this Warrant is outstanding (i) the Company effects any merger or consolidation of the Company with or into another Person, in which the Company is not the surviving entity or in which the stockholders of the Company immediately prior to such merger or consolidation do not own, directly or indirectly, at least 50% of the voting power of the surviving entity immediately after such merger or consolidation, (ii) the Company effects any sale to another Person of all or substantially all of its assets in one or a series of related transactions, (iii) pursuant to any tender offer or exchange offer (whether by the Company or another Person), holders of capital stock tender shares representing more than 50% of the voting power of the capital stock of the Company and the Company or such other Person, as applicable, accepts such tender for payment, (iv) the Company consummates a stock purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than the 50% of the voting power of the capital stock of the Company (except for any such transaction in which the stockholders of the Company immediately prior to such transaction maintain, in substantially the same proportions, the voting power of such Person immediately after the transaction) or (v) the Company effects any reclassification 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 (other than as a result of a subdivision or combination of shares of Common Stock covered by Section 9(a) above) (in any such case, a "**Fundamental Transaction**"), then following such Fundamental Transaction the Holder shall have the right to receive, upon exercise of this Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant Shares then issuable upon exercise in full of this Warrant without regard to any limitations on exercise contained herein (the "**Alternate Consideration**"). The Company shall not effect any Fundamental Transaction in which the Company is not the surviving entity or the Alternate Consideration includes securities of another Person unless (i) the Alternate Consideration is solely cash and the Company provides for the simultaneous "cashless exercise" of this Warrant pursuant to Section 10 below or (ii) prior to or simultaneously with the consummation thereof, any successor to the Company, surviving entity or other Person (including any purchaser of assets of the Company) shall assume the obligation to deliver to the Holder such Alternate Consideration as, in accordance with the foregoing provisions, the Holder may be entitled to receive, and the other obligations under this Warrant. The provisions of this paragraph (c) shall similarly apply to subsequent transactions analogous of a Fundamental Transaction type.

(d) **Number of Warrant Shares.** Simultaneously with any adjustment to the Exercise Price pursuant to Section 9, the number of Warrant Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the increased or decreased number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment.

(e) **Calculations.** All calculations under this Section 9 shall be made to the nearest 1/10,000th of one cent or the nearest 1/10,000th of a share, as applicable.

(f) **Notice of Adjustments.** Upon the occurrence of each adjustment pursuant to this Section 9, the Company at its expense will, at the written request of the Holder, promptly compute such adjustment, in good faith, in accordance with the terms of this Warrant and prepare a certificate setting forth such adjustment, including a statement of the adjusted Exercise Price and adjusted number or type of Warrant Shares or other securities issuable upon exercise of this Warrant (as applicable), describing the transactions giving rise to such adjustments and showing in detail the facts upon which such adjustment is based. Upon written request, the Company will promptly deliver a copy of each such certificate to the Holder and to the Company's transfer agent.

(g) Notice of Corporate Events. If, while this Warrant is outstanding, the Company (i) declares a dividend or any other distribution of cash, securities or other property in respect of its Common Stock, including, without limitation, any granting of rights or warrants to subscribe for or purchase any capital stock of the Company or any subsidiary, (ii) authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction or (iii) authorizes the voluntary dissolution, liquidation or winding up of the affairs of the Company, then the Company shall deliver to the Holder a notice of such transaction at least ten (10) days prior to the applicable record or effective date on which a Person would need to hold Common Stock in order to participate in or vote with respect to such transaction; provided, however, that the failure to deliver such notice or any defect therein shall not affect the validity of the corporate action required to be described in such notice. In addition, if while this Warrant is outstanding, the Company authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction contemplated by Section 9(c), other than a Fundamental Transaction under clause (iii) of Section 9(c), the Company shall deliver to the Holder a notice of such Fundamental Transaction at least thirty (30) days prior to the date such Fundamental Transaction is consummated. Holder agrees to maintain any information disclosed pursuant to this Section 9(g) in confidence until such information is publicly available, and shall comply with applicable law with respect to trading in the Company's securities following receipt any such information.

10. *Payment of Exercise Price*. Notwithstanding anything contained herein to the contrary, the Holder may, in its sole discretion, satisfy its obligation to pay the Exercise Price through a "cashless exercise", in which event the Company shall issue to the Holder the number of Warrant Shares in an exchange of securities effected pursuant to Section 3(a)(9) of the Securities Act, as determined as follows:

$$X = Y [(A-B)/A]$$

where:

"X" equals the number of Warrant Shares to be issued to the Holder;

"Y" equals the total number of Warrant Shares with respect to which this Warrant is then being exercised;

"A" equals the Closing Sale Price of the shares of Common Stock as of the Trading Day on the date immediately preceding the Exercise Date; and

"B" equals the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

For purposes of Rule 144 promulgated under the Securities Act, it is intended, understood and acknowledged that the Warrant Shares issued in a "cashless exercise" transaction shall be deemed to have been acquired by the Holder, and the holding period for the Warrant Shares shall be deemed to have commenced, on the date this Warrant was originally issued (provided that the Commission continues to take the position that such treatment is proper at the time of such exercise). In the event that the Registration Statement or another registration statement registering the issuance of Warrant Shares is, for any reason, not effective at the time of exercise of this Warrant, then the Warrant may only be exercised through a cashless exercise, as set forth in this Section 10. If the Warrant Shares are issued in such a cashless exercise, the Company acknowledges and agrees that, in accordance with Section 3(a)(9) of the Securities Act, the Exercise Shares issued in such exercise shall take on the registered characteristics of the Warrants being exercised and may be tacked on to the holding period of the Warrants being exercised. Except as set forth in Section 5(b) (Buy-In remedy) and Section 12 (payment of cash in lieu of fractional shares), in no event will the exercise of this Warrant be settled in cash.

11. *Limitations on Exercise*.

(a) Notwithstanding anything to the contrary contained herein, the Company shall not effect the exercise of any portion of this Warrant, and the Holder of the Warrant shall not have the right to exercise any portion of the Warrant, and any such exercise shall be null and void ab initio and treated as if the exercise had not been made, to the extent that immediately prior to or following such exercise, the Holder, together with the Attribution Parties, beneficially owns or would beneficially own as determined in accordance with Section 13(d) of the Exchange Act and the rules promulgated thereunder, in excess of 4.99% (the "**Maximum Percentage**") of the Common Stock that would be issued and outstanding following such exercise. For purposes of calculating beneficial ownership for determining

whether the Maximum Percentage is or will be exceeded, the aggregate number of shares of Common Stock held and/or beneficially owned by the Holder together with the Attribution Parties, shall include the number of shares of Common Stock held and/or beneficially owned by the Holder together with the Attribution Parties plus the number of shares of Common Stock issuable upon exercise of the relevant Warrant with respect to which the determination is being made but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, unexercised Warrant held and/or beneficially owned by the Holder or the Attribution Parties and (ii) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company held and/or beneficially owned by such Holder or any Attribution Party (including, without limitation, any non-voting common stock, par value \$0.0001, of the Company, convertible notes, convertible stock or warrants) that are subject to a limitation on conversion or exercise analogous to the limitation contained herein. For purposes of this Paragraph 11(a), beneficial ownership of the Holder or the Attribution Parties shall, except as set forth in the immediately preceding sentence, be calculated and determined in accordance with Section 13(d) of the Exchange Act and the rules promulgated thereunder. For purposes of the Warrant, in determining the number of outstanding shares of Common Stock, a Holder of the Warrant may rely on the number of outstanding shares of Common Stock as reflected in (1) the Company's most recent Form 10-K, Form 10-Q, Current Report on Form 8-K or other public filing with the Securities and Exchange Commission, as the case may be, (2) a more recent public announcement by the Company or (3) any other notice by the Company or the Company's transfer agent setting forth the number of shares of Common Stock outstanding (such issued and outstanding shares, the "**Reported Outstanding Share Number**"). For any reason at any time, upon the written or oral request of the Holder, the Company shall within one (1) Business Day confirm orally and in writing or by electronic mail to the Holder the number of shares of Common Stock then outstanding. The Holder shall disclose to the Company the number of shares of Common Stock that it, together with the Attribution Parties holds and/or beneficially owns and has the right to acquire through the exercise of derivative securities and any limitations on exercise or conversion analogous to the limitation contained herein contemporaneously or immediately prior to submitting an Exercise Notice for the relevant Warrant. If the Company receives an Exercise Notice from the Holder at a time when the actual number of outstanding shares of Common Stock is less than the Reported Outstanding Share Number, the Company shall (i) notify the Holder in writing of the number of shares of Common Stock then outstanding and, to the extent that such Exercise Notice would otherwise cause the Holder's, together with the Attribution Parties', beneficial ownership, as determined pursuant to this Section 11(a), to exceed the Maximum Percentage, the Holder must notify the Company of a reduced number of Warrant Shares to be purchased pursuant to such Exercise Notice (the number of shares by which such purchase is reduced, the "**Reduction Shares**") and (ii) as soon as reasonably practicable, the Company shall return to the Holder any exercise price paid by the Holder for the Reduction Shares. 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 and the Attribution Parties since the date as of which the Reported Outstanding Share Number was reported. In the event that the issuance of Common Stock to the Holder upon exercise of this Warrant results in the Holder, together with the Attribution Parties, being deemed to beneficially own, in the aggregate, more than the Maximum Percentage of the number of outstanding shares of Common Stock (as determined under Section 13(d) of the Exchange Act), the number of shares so issued by which the Holder's, together with the Attribution Parties', aggregate beneficial ownership exceeds the Maximum Percentage (the "**Excess Shares**") shall be deemed null and void and shall be cancelled ab initio, and the Holder and/or the Attribution Parties shall not have the power to vote or to transfer the Excess Shares and, for the avoidance of doubt, the right to purchase such Excess Shares pursuant to the Warrant shall remain outstanding (subject to this clause (a)). As soon as reasonably practicable after the issuance of the Excess Shares has been deemed null and void, the Company shall return to the Holder the exercise price paid by the Holder for the Excess Shares. By written notice to the Company, a Holder of the Warrant may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 19.99% specified in such notice; provided that any increase in the Maximum Percentage will not be effective until the sixty-first (61st) day after such notice is delivered to the Company and shall not negatively affect any partial exercise effected prior to such change.

(b) This Section 11 shall not restrict the number of shares of Common Stock which a Holder or the Attribution Parties may receive or beneficially own in order to determine the amount of securities or other consideration that such Holder or the Attribution Parties may receive in the event of a Fundamental Transaction as contemplated in Section 9(c) of this Warrant. For purposes of clarity, the shares of Common Stock issuable pursuant to the terms of this Warrant in excess of the Maximum Percentage shall not be deemed to be beneficially owned by the Holder or the Attribution Parties for any purpose including for purposes of Section 13(d) of the Exchange Act and the rules promulgated thereunder or Section 16 of the Exchange Act Rule 16a-1(a)(1) promulgated thereunder. No prior inability to exercise this Warrant pursuant to this paragraph shall have any effect on the applicability of the provisions

of this paragraph with respect to any subsequent determination of exercisability. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 11(a) to the extent necessary to correct this paragraph or any portion of this paragraph which may be defective or inconsistent with the intended beneficial ownership limitation contained in this Section 11(a) or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitation contained in this paragraph may not be waived and shall apply to a successor holder of this Warrant.

12. *No Fractional Shares.* No fractional Warrant Shares will be issued in connection with any exercise of this Warrant. In lieu of any fractional shares that would otherwise be issuable, the number of Warrant Shares to be issued shall be rounded down to the next whole number and the Company shall pay the Holder in cash the fair market value (based on the Closing Sale Price) for any such fractional shares.

13. *Notices.* Any and all notices or other communications or deliveries hereunder (including, without limitation, any Exercise Notice) shall be in writing and shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered confirmed e-mail at the e-mail address specified in the books and records of the Transfer Agent prior to 5:30 P.M., New York City time, on a Trading Day, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via confirmed e-mail at the e-mail address specified in the books and records of the Transfer Agent on a day that is not a Trading Day or later than 5:30 P.M., New York City time, on any Trading Day, (iii) the Trading Day following the date of mailing, if sent by nationally recognized overnight courier service specifying next business day delivery, or (iv) upon actual receipt by the Person to whom such notice is required to be given, if by hand delivery.

14. *Warrant Agent.* The Company shall initially serve as warrant agent under this Warrant. Upon thirty (30) days' notice to the Holder, the Company may appoint a new warrant agent. Any corporation into which the Company or any new warrant agent may be merged or any corporation resulting from any consolidation to which the Company or any new warrant agent shall be a party or any corporation to which the Company or any new warrant agent transfers substantially all of its corporate trust or shareholders services business shall be a successor warrant agent under this Warrant without any further act. Any such successor warrant agent shall promptly cause notice of its succession as warrant agent to be mailed (by first class mail, postage prepaid) to the Holder at the Holder's last address as shown on the Warrant Register.

15. *Miscellaneous.*

(a) No Rights as a Stockholder. Except as otherwise set forth in this Warrant, the Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, amalgamation, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company.

(b) Authorized Shares. (i) 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 or articles 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 (a) 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, (b) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and non-assessable Warrant Shares upon the exercise of this Warrant, and (c) use commercially reasonable efforts to 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.

(ii) 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 and any stock exchange on which the Common Stock may then be listed.

(c) Successors and Assigns. Subject to compliance with applicable securities laws, this Warrant may be assigned by the Holder. This Warrant may not be assigned by the Company without the written consent of the Holder, except to a successor in the event of a Fundamental Transaction. This Warrant shall be binding on and inure to the benefit of the Company and the Holder and their respective successors and assigns. Subject to the preceding sentence, nothing in this Warrant shall be construed to give to any Person other than the Company and the Holder any legal or equitable right, remedy or cause of action under this Warrant. This Warrant may be amended only in writing signed by the Company and the Holder, or their successors and assigns.

(d) Amendment and Waiver. Except as otherwise provided herein, the provisions of the Warrants may be amended and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Holder.

(e) Acceptance. Receipt of this Warrant by the Holder shall constitute acceptance of and agreement to all of the terms and conditions contained herein.

(f) Governing Law; Jurisdiction. ALL QUESTIONS CONCERNING THE CONSTRUCTION, VALIDITY, ENFORCEMENT AND INTERPRETATION OF THIS WARRANT SHALL BE GOVERNED BY AND CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAW THEREOF. EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY SUBMITS TO THE EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS SITTING IN THE CITY OF NEW YORK, BOROUGH OF MANHATTAN, FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HERewith OR WITH ANY TRANSACTION CONTEMPLATED HEREBY OR DISCUSSED HEREIN (INCLUDING WITH RESPECT TO THE ENFORCEMENT OF ANY OF THE TRANSACTION DOCUMENTS), AND HEREBY IRREVOCABLY WAIVES, AND AGREES NOT TO ASSERT IN ANY SUIT, ACTION OR PROCEEDING, ANY CLAIM THAT IT IS NOT PERSONALLY SUBJECT TO THE JURISDICTION OF ANY SUCH COURT. EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF PROCESS AND CONSENTS TO PROCESS BEING SERVED IN ANY SUCH SUIT, ACTION OR PROCEEDING BY MAILING A COPY THEREOF VIA REGISTERED OR CERTIFIED MAIL OR OVERNIGHT DELIVERY (WITH EVIDENCE OF DELIVERY) TO SUCH PERSON AT THE ADDRESS IN EFFECT FOR NOTICES TO IT AND AGREES THAT SUCH SERVICE SHALL CONSTITUTE GOOD AND SUFFICIENT SERVICE OF PROCESS AND NOTICE THEREOF. NOTHING CONTAINED HEREIN SHALL BE DEEMED TO LIMIT IN ANY WAY ANY RIGHT TO SERVE PROCESS IN ANY MANNER PERMITTED BY LAW. EACH OF THE COMPANY AND THE HOLDER HEREBY WAIVES ALL RIGHTS TO A TRIAL BY JURY.

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

(h) Severability. In case any one or more of the provisions of this Warrant shall be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Warrant shall not in any way be affected or impaired thereby, and the Company and the Holder will attempt in good faith to agree upon a valid and enforceable provision which shall be a commercially reasonable substitute therefor, and upon so agreeing, shall incorporate such substitute provision in this Warrant.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

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

TSCAN THERAPEUTICS, INC.

By: _____
Name:
Title:

SCHEDULE 1

FORM OF EXERCISE NOTICE

[To be executed by the Holder to purchase shares of Common Stock under the Warrant]

Ladies and Gentlemen:

(1) The undersigned is the Holder of Warrant No. ___ (the “**Warrant**”) issued by TScan Therapeutics, Inc., a Delaware corporation (the “**Company**”). Capitalized terms used herein and not otherwise defined herein have the respective meanings set forth in the Warrant.

(2) The undersigned hereby exercises its right to purchase Warrant Shares pursuant to the Warrant.

(3) The Holder intends that payment of the Exercise Price shall be made as (check one):

- Cash Exercise
- “**Cashless Exercise**” under Section 10 of the Warrant

(4) If the Holder has elected a Cash Exercise, the Holder shall pay the sum of \$ in immediately available funds to the Company in accordance with the terms of the Warrant.

(5) Pursuant to this Exercise Notice, the Company shall deliver to the Holder Warrant Shares determined in accordance with the terms of the Warrant.

(6) By its delivery of this Exercise Notice, the undersigned represents and warrants to the Company that in giving effect to the exercise evidenced hereby the Holder will not beneficially own in excess of the number of shares of Common Stock (as determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended) permitted to be owned under Section 11(a) of the Warrant to which this notice relates.

Dated: _____

Name of Holder: _____

By: _____

Name: _____

Title: _____

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



Goodwin Procter LLP
100 Northern Avenue
Boston, MA 02210

goodwinlaw.com
+1 617 570 1000

May 31, 2023

TScan Therapeutics, Inc.
830 Winter Street
Waltham, Massachusetts 02451

Re: Securities Registered under Registration Statement on Form S-3

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-3 (File No. 333-268260) (as amended or supplemented, the "**Registration Statement**") filed on November 9, 2022 with the Securities and Exchange Commission (the "**Commission**") pursuant to the Securities Act of 1933, as amended (the "**Securities Act**"), relating to the registration of the offer by TScan Therapeutics, Inc., a Delaware corporation (the "**Company**"), of up to \$250,000,000 of any combination of securities of the types specified therein. The Registration Statement was declared effective by the Commission on May 16, 2023. Reference is made to our opinion letter dated November 9, 2022 and included as Exhibit 5.1 to the Registration Statement. We are delivering this supplemental opinion letter in connection with the prospectus supplement (the "**Prospectus Supplement**") filed on May 30, 2023 by the Company with the Commission pursuant to Rule 424 under the Securities Act. The Prospectus Supplement relates to the offering by the Company of (i) up to an aggregate of 33,489,474 shares (the "**Shares**") of the Company's voting common stock, par value \$0.0001 per share (the "**Voting Common Stock**"), and (ii) pre-funded warrants to purchase up to 47,010,526 shares (the "**Pre-Funded Warrant Shares**") of Voting Common Stock of the Company (the "**Pre-Funded Warrants**"), and together with the Shares and the Pre-Funded Warrant Shares, the "**Securities**"), covered by the Registration Statement. The Shares include an over-allotment option granted to the underwriters of the offering to purchase 10,500,000 shares of Voting Common Stock. The Securities are being sold to the several underwriters named in, and pursuant to, an underwriting agreement among the Company and such underwriters (the "**Underwriting Agreement**").

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinion set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinion set forth below, on certificates of officers of the Company.

The opinion set forth below is limited to the Delaware General Corporation Law.

Based on the foregoing, we are of the opinion that:

1. The Shares have been duly authorized and, when delivered and paid for in accordance with the terms of the Underwriting Agreement, will be validly issued, fully paid and non-assessable.

2. The Pre-Funded Warrants have been duly authorized by the Company and, when executed by the Company and delivered and paid for in accordance with the terms of the Underwriting Agreement, will be valid and binding obligations of the Company.

3. Assuming sufficient authorized but unissued shares of Voting Common Stock are available for issuance when the Pre-Funded Warrants are exercised, the Pre-Funded Warrant Shares, when issued upon exercise of the Pre-Funded Warrants in accordance with the terms of the Pre-Funded Warrants, will be validly issued, fully paid and non-assessable.

This opinion letter and the opinion it contains shall be interpreted in accordance with the Core Opinion Principles as published in *74 Business Lawyer* 815 (Summer 2019).

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement and to the references to our firm under the caption “Legal Matters” in the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ GOODWIN PROCTER LLP

GOODWIN PROCTER LLP



TScan Therapeutics Announces Launch of Proposed Public Offering

WALTHAM, Mass., May 25, 2023 — TScan Therapeutics, Inc. (Nasdaq: TCRX), a clinical-stage biopharmaceutical company focused on the development of T cell receptor (TCR)-engineered T cell therapies (TCR-T) for the treatment of patients with cancer, today announced that it has commenced an underwritten public offering of shares of voting common stock and, in lieu of voting common stock to investors that so choose, non-voting common stock and pre-funded warrants to purchase shares of common stock. All shares of common stock and pre-funded warrants to be sold in the offering will be offered by TScan. TScan intends to grant the underwriters a 30-day option to purchase additional shares of its voting common stock in an amount equal to 15% of the securities offered in the public offering. The offering is subject to market, regulatory and other conditions and there can be no assurance as to whether or when the offering may be completed, or as to the actual size or terms of the offering.

Morgan Stanley and Wedbush PacGrow are acting as joint book-running managers for the offering.

The Company intends to use the net proceeds from the offering for general corporate purposes.

A registration statement on Form S-3 (File No. 333-268260) relating to these securities was filed with the Securities and Exchange Commission (the SEC) on November 9, 2022, and was declared effective by the SEC on May 16, 2023. A offering is being made only by means of a preliminary prospectus supplement and accompanying prospectus which will be filed with the SEC and will be available for free on the SEC's website at <http://www.sec.gov>. Copies of the preliminary prospectus supplement and the accompanying prospectus relating to the offering, when available, may be obtained from: Morgan Stanley & Co. LLC, Attention: Prospectus Department, 180 Varick Street, 2nd Floor, New York, New York 10014, telephone: (866) 718-1649 or by emailing prospectus@morganstanley.com.

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

About TScan Therapeutics, Inc.

TScan is a clinical-stage biopharmaceutical company focused on the development of T cell receptor (TCR)-engineered T cell therapies (TCR-T) for the treatment of patients with cancer. The Company's lead TCR-T therapy candidates, TSC-100 and TSC-101, are in development for the treatment of patients with hematologic malignancies to eliminate residual disease and prevent relapse after allogeneic hematopoietic cell transplantation.

The Company is also developing multiplexed TCR-T therapy candidates for the treatment of various solid tumors. The Company has developed and continues to build its ImmunoBank, the Company's repository of therapeutic TCRs that recognize diverse targets and are associated with multiple HLA types, to provide customized multiplexed TCR-T therapies for patients with a variety of solid tumors.

Forward-Looking Statements

This release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including, but not limited to, statements related to TScan's ability to complete the financing and its use of proceeds. These and other risks are discussed in TScan's filings with the SEC, including, without limitation, its most recent Annual Report on Form 10-K, and its periodic reports on Form 10-Q and Form 8-K, as well as the risks identified in the registration statement and the preliminary prospectus supplement relating to the offering. TScan intends such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 21E of the Securities Exchange Act of 1934 and the Private Securities Litigation Reform Act of 1995. In some cases, you can identify forward-looking statements by terms such as, but not limited to, "may," "might," "advance," "will," "objective," "intend," "should," "could," "can," "would," "expect," "believe," "anticipate," "project," "target," "design," "estimate," "predict," "potential," "plan," "on track," or similar expressions or the negative of those terms. Such forward-looking statements are based upon current expectations that involve risks, changes in circumstances, assumptions, and uncertainties. Any forward-looking statements contained in this release represent TScan's views only as of the date hereof and should not be relied upon as representing its views as of any subsequent date. Except as required by law, TScan explicitly disclaims any obligation to update any forward-looking statements.

Contacts

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TScan Therapeutics Announces Pricing of \$140 Million Public Offering

WALTHAM, Mass., May 26, 2023 — TScan Therapeutics, Inc. (Nasdaq: TCRX), a clinical-stage biopharmaceutical company focused on the development of T cell receptor (TCR)-engineered T cell therapies (TCR-T) for the treatment of patients with cancer, today announced the pricing of an underwritten public offering of 22,989,474 shares of its voting common stock at a public offering price of \$2.00 per share, and pre-funded warrants to purchase up to an aggregate of 47,010,526 shares of its common stock at a price to the public of \$1.9999 per pre-funded warrant, which represents the per share public offering price for the voting common stock less the \$0.0001 per share exercise price for each such pre-funded warrant. In addition, TScan has granted the underwriters a 30-day option to purchase up to an additional 10,500,000 shares of its voting common stock at the public offering price, less underwriting discounts and commissions. The gross proceeds to TScan from this offering are expected to be approximately \$140.0 million, before deducting underwriting discounts and commissions and other estimated offering expenses payable by TScan, assuming no exercise of the underwriter's option to purchase additional shares of voting common stock. The offering is expected to close on or about May 31, 2023 for the voting common stock, and June 1, 2023 for the pre-funded warrants, in each case, settlement is subject to customary closing conditions.

Morgan Stanley and Wedbush PacGrow are acting as joint book-running managers for the offering.

The Company intends to use the net proceeds from the offering for general corporate purposes. Following this offering, the Company expects its existing cash and cash equivalents will enable it to fund its operating expenses and capital expenditure requirements into 2026.

A registration statement on Form S-3 (File No. 333-268260) relating to these securities was filed with the Securities and Exchange Commission (the SEC) on November 9, 2022, and was declared effective by the SEC on May 16, 2023. The offering was made only by means of a preliminary prospectus supplement and accompanying filed with the SEC. A final prospectus supplement and accompanying prospectus relating to the offering will also be filed with the SEC. These documents will be available for free on the SEC's website at <http://www.sec.gov>. Copies of the final prospectus supplement and the accompanying prospectus relating to the offering, when available, may be obtained from: Morgan Stanley & Co. LLC, Attention: Prospectus Department, 180 Varick Street, 2nd Floor, New York, New York 10014, telephone: (866) 718-1649 or by emailing prospectus@morganstanley.com, or Wedbush Securities Inc., Attention: ECM Prospectus Department, 1000 Wilshire Blvd. Los Angeles, CA 90017, phone: (213) 688-8000.

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

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