
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): December 29, 2025

TONIX PHARMACEUTICALS HOLDING CORP.

(Exact name of registrant as specified in its charter)

Nevada
(State or Other Jurisdiction
of Incorporation)

001-36019
(Commission
File Number)

26-1434750
(IRS Employer
Identification No.)

26 Main Street, Chatham, New Jersey 07928
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: **(862) 799-8599**

N/A
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

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

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	TNXP	The Nasdaq Stock 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 December 29, 2025, Tonix Pharmaceuticals Holding Corp. (the “Company”) entered into a securities purchase agreement (the “Purchase Agreement”) with a single institutional investor (the “Purchaser”). Pursuant to the Purchase Agreement, the Company agreed to issue and sell to the Purchaser in a registered direct offering (the “Offering”): (i) 615,025 shares (the “Shares”) of the Company’s common stock, \$0.001 par value per share (the “Common Stock”), and (ii) pre-funded warrants (the “Pre-Funded Warrants”) to purchase up to 615,025 shares of Common Stock (the “Pre-Funded Warrant Shares”). The offering price per Share is \$16.26 and the offering price per Pre-Funded Warrant is \$16.259.

The Offering is expected to close on or about December 30, 2025, subject to customary closing conditions. The Company expects to receive aggregate gross proceeds from the Offering of approximately \$20.0 million, before deducting placement agent fees and offering expenses payable by the Company.

The Shares, Pre-Funded Warrants and Pre-Funded Warrant Shares are being offered by the Company pursuant to an effective shelf registration statement on Form S-3 (File No. 333-287965), which was initially filed with the Securities and Exchange Commission (the “SEC”) on June 12, 2025, as amended, and declared effective by the SEC on September 4, 2025, together with a related base prospectus and a prospectus supplement, dated December 29, 2025, thereunder.

The Pre-Funded Warrants have an initial exercise price per share of \$0.001, subject to certain adjustments. The Pre-Funded Warrants may be exercised at any time until exercised in full, except that a holder (together with its affiliates) will not be entitled to exercise any portion of any Pre-Funded Warrant, which, upon giving effect to such exercise, would cause the aggregate number of shares of the Company’s Common Stock beneficially owned by the holder (together with its affiliates) to exceed 9.99% of the number of shares of Common Stock outstanding immediately prior to or after giving effect to the exercise, subject to such holder’s rights under the Pre-Funded Warrants to increase or decrease such percentage to another percentage not in excess of 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Pre-Funded Warrants, provided that any increase shall only be effective upon at least 61 days’ prior notice from such holder to the Company.

The Purchase Agreement contains customary representations, warranties and agreements by the Company, customary conditions to closing, indemnification obligations of the Company, other obligations of the parties, and termination provisions. Pursuant to the Purchase Agreement, the Company has agreed not to issue, enter into any agreement to issue or announce the issuance or proposed issuance of, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for shares of Common Stock or file any registration statement or prospectus, or any amendment or supplement thereto for 30 days after the closing date of the Offering, subject to certain exceptions. In addition, the Company has agreed not to effect or enter into an agreement to effect any issuance of Common Stock or any securities convertible into or exercisable or exchangeable for shares of Common Stock involving a Variable Rate Transaction (as defined in the Purchase Agreement) until 180 days after the closing date of the Offering, subject to certain exceptions. Additionally, each of the directors and officers of the Company, pursuant to lock-up agreements, agreed not to sell or transfer any of the Company securities which they hold, subject to certain exceptions, during the 30-day period following the date of the Placement Agency Agreement (as defined below).

On December 29, 2025, the Company entered into a placement agency agreement (the “Placement Agency Agreement”) with TD Securities (USA) LLC (the “Placement Agent”), pursuant to which the Placement Agent was engaged as the placement agent for the Offering. The Company agreed to pay the Placement Agent a placement agent fee in cash equal to 6.0% of the gross proceeds from the sale of the Shares in the Offering. The Company also agreed to reimburse the Placement Agent for all reasonable travel and other out-of-pocket expenses, including the reasonable fees of legal counsel, not to exceed \$100,000.

The Placement Agency Agreement contains customary representations, warranties and agreements by the Company, customary conditions to closing, indemnification obligations of the Company, including for liabilities under the Securities Act of 1933, as amended, other obligations of the parties, and termination provisions.

The Placement Agency Agreement, form of Purchase Agreement and form of Pre-Funded Warrant are filed as Exhibits 1.01, 10.01 and 4.01, respectively, to this Current Report on Form 8-K and are incorporated herein by reference. The above descriptions of the terms of the Placement Agency Agreement, Purchase Agreement and Pre-Funded Warrants are qualified in their entirety by reference to such exhibits.

The opinion of Brownstein Hyatt Farber Schreck, LLP regarding the validity of the Shares and the Pre-Funded Warrant Shares is filed as Exhibit 5.01 to this Current Report on Form 8-K and is incorporated herein by reference. The opinion of Lowenstein Sandler LLP regarding the validity of the Pre-Funded Warrants is filed as Exhibit 5.02 to this Current Report on Form 8-K and is incorporated herein by reference.

Item 8.01 Other Events.

On December 29, 2025, the Company issued a press release announcing the pricing of the Offering. A copy of the press release is attached hereto as Exhibits 99.01 and is incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibit	
No.	Description.
<u>1.01</u>	Placement Agency Agreement, dated December 29, 2025, between Tonix Pharmaceuticals Holding Corp. and TD Securities (USA) LLC
<u>4.01</u>	Form of Pre-Funded Warrant
<u>5.01</u>	Opinion of Brownstein Hyatt Farber Schreck, LLP
<u>5.02</u>	Opinion of Lowenstein Sandler LLP
<u>10.01</u>	Form of Securities Purchase Agreement
<u>23.01</u>	Consent of Brownstein Hyatt Farber Schreck, LLP (contained in Exhibit 5.01)
<u>23.02</u>	Consent of Lowenstein Sandler LLP (contained in Exhibit 5.02)
<u>99.01</u>	Press Release, dated December 29, 2025
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

SIGNATURE

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

TONIX PHARMACEUTICALS HOLDING CORP.

Date: December 29, 2025

By: /s/ Bradley Saenger
Bradley Saenger
Chief Financial Officer

TONIX PHARMACEUTICALS HOLDING CORP.
(a Nevada corporation)

615,025 Shares of Common Stock

Pre-Funded Warrants to purchase up to 615,025 shares of Common Stock

PLACEMENT AGENCY AGREEMENT

December 29, 2025

TD Securities (USA) LLC
1 Vanderbilt Avenue
New York, New York 10017

Ladies and Gentlemen:

Tonix Pharmaceuticals Holding Corp., a Nevada corporation (the “Company”), proposes, subject to the terms and conditions herein, to issue and sell an aggregate of up to (i) 615,025 (the “Shares”), of common stock \$0.001 par value per share (the “Common Stock”) and (ii) pre-funded warrants (the “Pre-Funded Warrants”) and together with the Shares, the “Securities”) to purchase up to 615,025 shares of Common Stock (the “Warrant Shares”) to certain investors (each an “Investor” and collectively the “Investors”), in an offering under its registration statement on Form S-3 (Registration No. 333-287965) (the “Registration Statement”). The Securities are more fully described in the General Disclosure Package (as defined below). The Company desires to engage TD Securities (USA) LLC as the Company’s placement agent (the “Placement Agent”) in connection with such issuance and sale of the Securities. As used herein, the term “Placement Agent” includes any person substituted for or added as a Placement Agent.

SECTION 1. Agreement to Act as Placement Agent.

(a) On the basis of the representations, warranties and agreements of the Company herein contained, and subject to all the terms and conditions of this Placement Agency Agreement (this “Agreement”) between the Company and the Placement Agent, the Placement Agent agrees to act as placement agent on a commercially reasonable efforts basis, in connection with the issuance and sale by the Company of the Securities to the Investors in a proposed takedown under the Registration Statement (as defined below), with the terms of the offering to be subject to market conditions and negotiations between the Company, the Placement Agent and the prospective Investors (such takedown shall be referred to herein as the “Offering”). As compensation for services rendered, and provided that any of the Securities are sold to Investors in the Offering, on the Closing Date (as defined below) of the Offering, the Company shall pay to the Placement Agent an amount equal to 6.0% of the gross proceeds received by the Company from the sale of the Securities (the “Placement Fee”). The sale of the Securities shall be made pursuant to securities purchase agreements in form and substance satisfactory to the Placement Agent (each, a “Securities Purchase Agreement”) and collectively, the “Securities Purchase Agreements”) on the terms described on Schedule A-1 hereto. Any capitalized term used herein but not defined herein shall have meaning set forth in the Securities Purchase Agreements.

(b) This Agreement shall not give rise to any commitment by the Placement Agent to purchase any of the Securities, and the Placement Agent shall have no authority to bind the Company to accept offers to purchase the Securities. The Placement Agent shall act on a commercially reasonable efforts basis and does not guarantee that it will be able to raise new capital in the Offering. Prior to the earlier of (i) the date on which this Agreement is terminated and (ii) the Closing Date, the Company shall not, without the prior written consent of the Placement Agent, solicit or accept offers to purchase the Securities (other than pursuant to the exercise of options or warrants to purchase shares of Common Stock that are outstanding at the date hereof) otherwise than through the Placement Agent in accordance herewith.

(c) Payment of the purchase price for, and delivery of, the Securities shall be made at a closing (the “Closing”) as set forth in the Securities Purchase Agreements (such date of payment and delivery being herein called the “Closing Date”). All such actions taken at the Closing shall be deemed to have occurred simultaneously. No Securities which the Company has agreed to sell pursuant to this Agreement and the Securities Purchase Agreements shall be deemed to have been purchased and paid for, or sold by the Company, until such Securities shall have been delivered to the Investor purchasing such Securities against payment therefor by such Investor. If the Company shall default in its obligations to deliver Securities to an Investor with which it has entered into a Securities Purchase Agreement, the Company shall indemnify and hold the Placement Agents harmless from and against any loss, claim, damage or liability incurred by the Placement Agents arising from or as a result of such default by the Company.

(d) The Securities shall be delivered through the facilities of The Depository Trust Company and shall be registered in such name or names and shall be in such denominations, as the Investors may request as set forth in the Securities Purchase Agreements.

(e) The Company has filed with the Securities and Exchange Commission (the “Commission”) a shelf registration statement on Form S-3 (No. 333-287965), covering the offering and sale of certain securities, including the Securities, under the Securities Act of 1933, as amended (the “1933 Act”) and the rules and regulations of the Commission promulgated thereunder (the “1933 Act Regulations”), which shelf registration statement was declared effective on September 4, 2025. Such registration statement, as of any time, means such registration statement as amended by any post-effective amendments thereto at such time, including the exhibits and any schedules thereto at such time, the documents incorporated or deemed to be incorporated by reference therein at such time pursuant to Item 12 of Form S-3 under the 1933 Act and the documents otherwise deemed to be a part thereof as of such time pursuant to Rule 430B under the 1933 Act Regulations (“Rule 430B”), is referred to herein as the “Registration Statement;” provided, however, that the “Registration Statement” without reference to a time means such registration statement as amended by any post-effective amendments thereto as of the time of the first contract of sale for the Securities, which time shall be considered the “new effective date” of such registration statement with respect to the Securities within the meaning of paragraph (f)(2) of Rule 430B, including the exhibits and schedules thereto as of such time, the documents incorporated or deemed incorporated by reference therein at such time pursuant to Item 12 of Form S-3 under the 1933 Act and the documents otherwise deemed to be a part thereof as of such time pursuant to the Rule 430B. Any registration statement filed pursuant to Rule 462(b) of the 1933 Act Regulations in connection with the offer and sale of the Securities is herein called the “Rule 462(b) Registration Statement” and, after such filing, the term “Registration Statement” shall include the Rule 462(b) Registration Statement. The base prospectus filed as part of the Registration Statement in the form in which has most recently been filed with the Commission on or prior to the date of this Agreement, together with any documents incorporated by reference therein, is herein called the “Base Prospectus.” Each preliminary prospectus, if any, used in connection with the offering of the Securities, including the documents incorporated or deemed to be incorporated by reference therein pursuant to Item 12 of Form S-3 under the 1933 Act, are collectively referred to herein as a “preliminary prospectus.” Promptly after execution and delivery of this Agreement, the Company will prepare and file a final prospectus relating to the Securities in accordance with the provisions of Rule 424(b) under the 1933 Act Regulations (“Rule 424(b)”). The final prospectus, in the form first furnished or made available to the Placement Agents for use in connection with the offering of the Securities, including the documents incorporated or deemed to be incorporated by reference therein pursuant to Item 12 of Form S-3 under the 1933 Act, are collectively referred to herein as the “Prospectus.” For purposes of this Agreement, all references to the Registration Statement, the Base Prospectus, any preliminary prospectus, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval system (or any successor system)(“EDGAR”).

As used in this Agreement:

“Applicable Time” means 7:00 a.m., New York City time, on December 29, 2025 or such other time as agreed by the Company and the Placement Agents.

“General Disclosure Package” means the Base Prospectus, as most recently amended or supplemented prior to the Applicable Time (including any documents incorporated by reference therein), together with any Issuer General Use Free Writing Prospectuses issued at or prior to the Applicable Time, the most recent preliminary prospectus (including any documents incorporated therein by reference) that is distributed to investors prior to the Applicable Time, if any, and the information included on Schedule A-1 hereto, all considered together.

“Issuer Free Writing Prospectus” means any “issuer free writing prospectus,” as defined in Rule 433 of the 1933 Act Regulations (“Rule 433”), including without limitation any “free writing prospectus” (as defined in Rule 405 of the 1933 Act Regulations (“Rule 405”)) relating to the Securities that is (i) required to be filed with the Commission by the Company, (ii) a “road show for an offering that is a written communication” within the meaning of Rule 433(d)(8)(i), whether or not required to be filed with the Commission, or (iii) exempt from filing with the Commission pursuant to Rule 433(d)(5)(i) because it contains a description of the Securities or of the offering that does not reflect the final terms, in each case in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company’s records pursuant to Rule 433(g).

“Issuer General Use Free Writing Prospectus” means any Issuer Free Writing Prospectus that is intended for general distribution to prospective investors (other than a “*bona fide* electronic road show,” as defined in Rule 433 (a “Bona Fide Electronic Road Show”)), as evidenced by its being specified in Schedule A-2 hereto.

“Issuer Limited Use Free Writing Prospectus” means any Issuer Free Writing Prospectus that is not an Issuer General Use Free Writing Prospectus.

“Testing-the-Waters Communication” means any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the 1933 Act.

“Written Testing-the-Waters Communication” means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the 1933 Act.

(f) All references in this Agreement to financial statements and schedules and other information which is “contained,” “included” or “stated” (or other references of like import) in the Registration Statement, any preliminary prospectus or the Prospectus shall be deemed to include all such financial statements and schedules and other information incorporated or deemed incorporated by reference in the Registration Statement, any preliminary prospectus or the Prospectus, as the case may be, prior to the execution and delivery of this Agreement; and all references in this Agreement to amendments or supplements to the Registration Statement, any preliminary prospectus or the Prospectus shall be deemed to include the filing of any document under the Securities Exchange Act of 1934, as amended (the “1934 Act”), and the rules and regulations promulgated thereunder (the “1934 Act Regulations”), incorporated or deemed to be incorporated by reference in the Registration Statement, such preliminary prospectus or the Prospectus, as the case may be, at or after the execution and delivery of this Agreement.

SECTION 2. Representations and Warranties.

(a) *Representations and Warranties by the Company.*

(i) *Disclosure Package.* The General Disclosure Package as of the Applicable Time did not, and as of the Closing Date, will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. No statement of material fact included in the Prospectus has been omitted from the General Disclosure Package and no statement of material fact included in the General Disclosure Package that is required to be included in the Prospectus has been omitted therefrom.

(ii) *Issuer Free Writing Prospectus.* Other than the Registration Statement and the Prospectus, the Company (including its agents and representatives, other than the Placement Agent in its capacity as such) has not prepared, made, used, authorized, approved or referred to and will not prepare, make, use, authorize, approve or refer to any “written communication” (as defined in Rule 405 under the Securities Act) that constitutes an offer to sell or solicitation of an offer to buy the Securities (each such communication by the Company or its agents and representatives (other than a communication referred to in clause (i) below) an “*Issuer Free Writing Prospectus*”) other than any document not constituting a prospectus pursuant to Section 2(a)(10)(a) of the Securities Act or Rule 134 under the Securities Act, each electronic road show and any other written communications approved in writing in advance by the Placement Agent. Each such Issuer Free Writing Prospectus complies in all material respects with the Securities Act, has been or will be (within the time period specified in Rule 433 under the Securities Act) filed in accordance with the Securities Act (to the extent required thereby) and does not conflict with the information contained in the Registration Statement or the General Disclosure Package, and did not, and as of the Closing, will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(iii) The Company represents and warrants to the Placement Agent as of the date hereof, the Applicable Time and the Closing Time (as defined below) the representations and warranties of the Company and covenants made by the Company to the Purchasers in the Securities Purchase Agreements in connection with the Offering, and such representations and warranties and covenants are hereby incorporated herein by reference into this Agreement (as though fully restated herein) and are, as of the date of this Agreement and as of the Closing Date, hereby made to, and in favor of, the Placement Agent.

(b) *Officer's Certificates.* Any certificate signed by any officer of the Company or any of its Subsidiaries delivered to the Placement Agent or to counsel for the Placement Agent to the provisions hereof shall be deemed a representation and warranty by the Company to the Placement Agent as to the matters covered thereby.

SECTION 3. Covenants of the Company. The Company covenants with the Placement Agent as follows:

(a) *Compliance with Securities Regulations and Commission Requests.* The Company, subject to Section 3(b), will comply with the requirements of Rule 430B, and will notify the Placement Agent as soon as practicable, and confirm the notice in writing, (i) when any post-effective amendment to the Registration Statement shall become effective or any amendment or supplement to the Prospectus shall have been filed, (ii) of the receipt of any comments from the Commission, (iii) of any request by the Commission for any amendment to the Registration Statement or any amendment or supplement to the Prospectus (including any document incorporated by reference therein) or for additional information, (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment or of any order preventing or suspending the use of any preliminary prospectus or the Prospectus, or of the suspension of the qualification of the Securities for offering or sale in any jurisdiction, or of the initiation or threatening of any proceedings for any of such purposes or of any examination pursuant to Section 8(d) or 8(e) of the 1933 Act concerning the Registration Statement and (v) if the Company becomes the subject of a proceeding under Section 8A of the 1933 Act in connection with the offering of the Securities. The Company will effect all filings required under Rule 424(b), in the manner and within the time period required by Rule 424(b) (without reliance on Rule 424(b)(8)), and will take such steps as it deems necessary to ascertain promptly whether the form of prospectus transmitted for filing under Rule 424(b) was received for filing by the Commission and, in the event that it was not, it will promptly file such prospectus. The Company will make every reasonable effort to prevent the issuance of any stop order, prevention or suspension and, if any such order is issued, to obtain the lifting thereof at the earliest possible moment.

(b) *Continued Compliance with Securities Laws.* The Company will comply with the 1933 Act, the 1933 Act Regulations, the 1934 Act and the 1934 Act Regulations so as to permit the completion of the distribution of the Securities as contemplated in this Agreement and in the Registration Statement, the General Disclosure Package and the Prospectus. If at any time when a prospectus relating to the Securities is (or, but for the exception afforded by Rule 172 of the 1933 Act Regulations (“Rule 172”), would be) required by the 1933 Act to be delivered in connection with sales of the Securities, any event shall occur or condition shall exist as a result of which it is necessary, in the opinion of counsel for the Placement Agent or for the Company, to (i) amend the Registration Statement in order that the Registration Statement will not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, (ii) amend or supplement the General Disclosure Package or the Prospectus in order that the General Disclosure Package or the Prospectus, as the case may be, will not include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein not misleading in the light of the circumstances existing at the time it is delivered to a purchaser or (iii) amend the Registration Statement or amend or supplement the General Disclosure Package or the Prospectus, as the case may be, in order to comply with the requirements of the 1933 Act or the 1933 Act Regulations, the Company will promptly (A) give the Placement Agent notice of such event, (B) prepare any amendment or supplement as may be necessary to correct such statement or omission or to make the Registration Statement, the General Disclosure Package or the Prospectus comply with such requirements and, a reasonable amount of time prior to any proposed filing or use, furnish the Placement Agent with copies of any such amendment or supplement and (C) file with the Commission any such amendment or supplement; provided that the Company shall not file or use any such amendment or supplement to which the Placement Agent or counsel for the Placement Agent shall reasonably object. The Company will furnish to the Placement Agent such number of copies of such amendment or supplement as the Placement Agent may reasonably request. The Company has given the Placement Agent notice of any filings made pursuant to the 1934 Act or the 1934 Act Regulations within 48 hours prior to the Applicable Time; the Company will give the Placement Agent notice of its intention to make any such filing from the Applicable Time to the Closing Time and will furnish the Placement Agent with copies of any such documents a reasonable amount of time prior to such proposed filing, as the case may be, and will not file or use any such document to which the Placement Agent or counsel for the Placement Agent shall reasonably object.

(c) *Delivery of Registration Statement.* The Company has furnished or will deliver to the Placement Agent and counsel for the Placement Agent, without charge, signed copies of the Registration Statement as originally filed and each amendment thereto (including exhibits filed therewith or incorporated by reference therein and documents incorporated or deemed incorporated by reference therein) and signed copies of all consents and certificates of experts, and will also deliver to the Placement Agent, without charge, a conformed copy of the Registration Statement as originally filed and each amendment thereto (without exhibits) for the Placement Agent. The copies of the Registration Statement and each amendment thereto furnished to the Placement Agent will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(d) *Delivery of Prospectuses.* The Company has delivered to the Placement Agent, without charge, as many copies of each preliminary prospectus as the Placement Agent reasonably requested, and the Company hereby consents to the use of such copies for purposes permitted by the 1933 Act. The Company will furnish to the Placement Agent, without charge, during the period when a prospectus relating to the Securities is (or, but for the exception afforded by Rule 172, would be) required to be delivered under the 1933 Act, such number of copies of the Prospectus (as amended or supplemented) as the Placement Agent may reasonably request. The Prospectus and any amendments or supplements thereto furnished to a Placement Agent will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(e) *Blue Sky Qualifications.* The Company will use its reasonable best efforts, in cooperation with the Placement Agent, to qualify the Securities for offering and sale under the applicable securities laws of such states and other jurisdictions (domestic or foreign) as the Placement Agent may reasonably designate and to maintain such qualifications in effect so long as required to complete the distribution of the Securities; provided, however, that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject.

(f) *Rule 158.* The Company will timely file such reports pursuant to the 1934 Act as are necessary in order to make generally available to its securityholders as soon as practicable an earning statement for the purposes of, and to provide to the Placement Agent the benefits contemplated by, the last paragraph of Section 11(a) of the 1933 Act.

(g) *Use of Proceeds.* The Company will use the net proceeds received by it from the sale of the Securities in all material respects in the manner specified in the Registration Statement, the General Disclosure Package and the Prospectus under the heading "Use of Proceeds."

(h) *Listing.* The Company will use its reasonable best efforts to effect and maintain the listing of the Common Stock (including the Securities) on the Nasdaq Capital Market or any higher tier of the Nasdaq Stock Market.

(i) *Reporting Requirements.* The Company, during the period when a Prospectus relating to the Securities is (or, but for the exception afforded by Rule 172, would be) required to be delivered under the 1933 Act, will use commercially reasonable efforts to file all documents required to be filed with the Commission pursuant to the 1934 Act within the time periods required by the 1934 Act and 1934 Act Regulations. Additionally, the Company shall report the use of proceeds from the issuance of the Securities as may be required under Rule 463 under the 1933 Act.

(j) *Issuer Free Writing Prospectuses.* The Company agrees that, unless it obtains the prior written consent of the Placement Agent, it will not make any offer relating to the Securities that would constitute an Issuer Free Writing Prospectus or that would otherwise constitute a “free writing prospectus,” or a portion thereof, required to be filed by the Company with the Commission or retained by the Company under Rule 433; provided that the Placement Agent will be deemed to have consented to the Issuer Free Writing Prospectuses listed on Schedule A-2 hereto and any “road show that is a written communication” within the meaning of Rule 433(d)(8)(i) that has been reviewed by the Placement Agent. The Company represents that it has treated or agrees that it will treat each such free writing prospectus consented to, or deemed consented to, by the Placement Agent as an “issuer free writing prospectus,” as defined in Rule 433, and that it has complied and will comply with the applicable requirements of Rule 433 with respect thereto, including timely filing with the Commission where required, legending and record keeping. If at any time following issuance of an Issuer Free Writing Prospectus there occurred or occurs an event or development as a result of which such Issuer Free Writing Prospectus conflicted or would conflict with the information contained in the Registration Statement, any preliminary prospectus or the Prospectus or 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 Placement Agent and will promptly amend or supplement, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission.

(k) *Testing-the-Waters Materials.* If at any time following the distribution of any Written Testing-the-Waters Communication there occurred or occurs an event or development as a result of which such Written 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 Placement Agent and will promptly amend or supplement, at its own expense, such Written Testing-the-Waters Communication to eliminate or correct such untrue statement or omission. The Company has not distributed any Written Testing-the-Waters Communications other than those listed on Schedule A-3 hereto.

(l) *Subsequent Equity Sales.*

(i) From the date hereof until thirty (30) days after the Closing Date, without the consent of the Placement Agent, neither the Company nor any Subsidiary shall (i) issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of Common Stock or Common Stock Equivalents or (ii) file any registration statement or amendment or supplement thereto, other than the Prospectus Supplement or filing a registration statement on Form S-8 in connection with any employee benefit plan.

(ii) From the date hereof until one hundred and eighty (180) days after the Closing Date, without the consent of the Placement Agent, the Company shall be prohibited from effecting or entering into an agreement to effect any issuance by the Company or any of its Subsidiaries of shares of Common Stock or Common Stock Equivalents (or a combination of units thereof) involving a Variable Rate Transaction. “Variable Rate Transaction” means a transaction in which the Company (i) issues or sells any debt or equity securities that are convertible into, exchangeable or exercisable for, or include the right to receive additional shares of Common Stock either (A) at a conversion price, exercise price or exchange rate or other price that is based upon and/or varies with the trading prices of or quotations for the shares of Common Stock at any time after the initial issuance of such debt or equity securities, or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such debt or equity security or upon the occurrence of specified or contingent events directly or indirectly related to the business of the Company or the market for the shares of Common Stock, or (ii) enters into, or effects a transaction under, any agreement, including, but not limited to, an equity line of credit or an “at-the-market offering”, whereby the Company may issue securities at a future determined price regardless of whether shares pursuant to such agreement have actually been issued and regardless of whether such agreement is subsequently cancelled; provided, however, that after thirty (30) days after the Closing Date, neither (i) the Company’s current “at-the-market” offering pursuant to the Sales Agreement, dated June 11, 2025, as amended on November 21, 2025, between the Company and A.G.P./Alliance Global Partners, (ii) shares of Common Stock sold to Lincoln Park Capital Fund, LLC pursuant to the Purchase Agreement, dated as of June 11, 2025, between the Company and Lincoln Park Capital Fund, LLC, nor (iii) the entry into and/or issuance of shares of Common Stock in (a) an “at-the-market” offering or (b) pursuant to a purchase agreement with Lincoln Park Capital Fund, LLC shall be deemed a Variable Rate Transaction. Any Purchaser shall be entitled to obtain injunctive relief against the Company to preclude any such issuance, which remedy shall be in addition to any right to collect damages.

(iii) Notwithstanding the foregoing, this Section 3(l) shall not apply in respect of an Exempt Issuance (as defined in the Securities Purchase Agreements), except that no Variable Rate Transaction shall be an Exempt Issuance.

SECTION 4. Payment of Expenses.

(a) *Expenses.* The Company will pay or cause to be paid all expenses incident to the performance of its obligations under this Agreement, including (i) the preparation, printing and filing of the Registration Statement (including financial statements and exhibits) as originally filed and each amendment thereto, (ii) the preparation, printing and delivery to the Placement Agent of copies of each preliminary prospectus, each Issuer Free Writing Prospectus and the Prospectus and any amendments or supplements thereto and any costs associated with electronic delivery of any of the foregoing by the Placement Agent to investors, (iii) the preparation, issuance and delivery of the certificates or security entitlements for the Securities to the Investors, including any stock or other transfer taxes and any stamp or other duties payable upon the sale, issuance or delivery of the Securities to the Investors, (iv) all fees and disbursements of the Company's counsel, accountants and other advisors, (v) the qualification of the Securities under state securities laws in accordance with Section 3(e) hereof, if any, including filing fees and the reasonable fees and disbursements of counsel for the Placement Agent in connection therewith and in connection with the preparation of a "Blue Sky Survey" and any supplement thereto, (vi) the fees and expenses of any transfer agent or registrar for the Securities, (vii) the costs and expenses of the Company relating to investor presentations on any "road show" undertaken in connection with the marketing of the Securities, including without limitation, 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, travel and lodging expenses of the representatives and officers of the Company and any such consultants, and the cost of aircraft and other transportation chartered in connection with the road show, (viii) the filing fees incident to the review by FINRA of the terms of the sale of the Securities, if any, (ix) the fees and expenses incurred in connection with the listing of the Securities on the Nasdaq Capital Market, (x) the costs and expenses (including, without limitation, any damages or other amounts payable in connection with legal or contractual liability) associated with the reforming of any contracts for sale of the Securities made by the Placement Agent caused by a breach of the representation contained in the third sentence of Section 2(a)(ii), and (xi) up to \$100,000 for accountable expenses related to legal fees of counsel to the Placement Agent. Except as provided in this Section 4, Section 6 or Section 7, the Placement Agent shall pay their own expenses, including the fees and disbursements of its counsel.

SECTION 5. Conditions of Placement Agent's Obligations. The obligations of the Placement Agent hereunder are subject to the accuracy of the representations and warranties of the Company contained in the Securities Purchase Agreements or in certificates of any officer of the Company or any of its Subsidiaries delivered pursuant to the provisions hereof, to the performance by the Company of its covenants and other obligations hereunder, and to the following further conditions:

(a) *Effectiveness of Registration Statement.* The Registration Statement, including any Rule 462(b) Registration Statement, has become effective and, at the Closing Time, no stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto has been issued under the 1933 Act, no order preventing or suspending the use of any preliminary prospectus or the Prospectus has been issued and no proceedings for any of those purposes have been instituted or are pending or, to the Company's knowledge, contemplated; and the Company has complied with each request (if any) from the Commission for additional information to the reasonable satisfaction of counsel to the Placement Agent.

(b) *Opinion of Counsel for Company.* At the Closing Time, the Placement Agent shall have received the opinion and the negative assurance letter, each dated the Closing Time, of Lowenstein Sandler LLP, counsel for the Company, a legal opinion of Brownstein Hyatt Farber Schreck, LLP, local Nevada counsel to the Company and an opinion of Haley Giuliano LLP, special counsel for the Company with respect to intellectual property matters, each in the form and substance satisfactory to the Placement Agent.

(c) *Opinion of Counsel for Placement Agent.* At the Closing Time, the Placement Agent shall have received the opinion, and negative assurance letter, each dated the Closing Time, of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., counsel for the Placement Agent, in form and substance satisfactory to the Placement Agents. In giving such opinion such counsel may rely, as to all matters governed by the laws of jurisdictions other than the law of the State of New York, the General Corporation Law of the State of Delaware and the federal securities laws of the United States, upon the opinions of counsel satisfactory to the Placement Agent. Such counsel may also state that, insofar as such opinion involves factual matters, they have relied, to the extent they deem proper, upon certificates of officers and other representatives of the Company and its Subsidiaries and certificates of public officials.

(d) *Officers' Certificate.* At the Closing Time, there shall not have been, since the date hereof or since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package or the Prospectus, any material adverse change in the condition, financial or otherwise, or in the earnings, business affairs or business prospects of the Company and its Subsidiaries considered as one enterprise, whether or not arising in the ordinary course of business, and the Placement Agent shall have received a certificate of the principal executive officer of the Company and of the principal financial officer of the Company, dated the Closing Time, to the effect that (i) there has been no such material adverse change, (ii) the representations and warranties of the Company in this Agreement are true and correct with the same force and effect as though expressly made at and as of the Closing Time, (iii) the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied at or prior to the Closing Time, and (iv) no stop order suspending the effectiveness of the Registration Statement under the 1933 Act has been issued, no order preventing or suspending the use of any preliminary prospectus or the Prospectus has been issued and no proceedings for any of those purposes have been instituted or are pending or, to their knowledge, contemplated.

(e) *Accountant's Comfort Letter.* At the time of the execution of this Agreement, the Placement Agent shall have received from EisnerAmper, LLP a letter, dated such date, in form and substance satisfactory to the Placement Agent, 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 General Disclosure Package and the Prospectus.

(f) *Bring-down Comfort Letter.* At the Closing Time, the Placement Agent shall have received from EisnerAmper, LLP a letter, dated as of the Closing Time, to the effect that they reaffirm the statements made in the letter furnished pursuant to subsection (e) of this Section, except that the specified date referred to shall be a date not more than two business days prior to the Closing Time.

(g) *Approval of Listing.* At the Closing Time, the Company shall have submitted a notice of listing of additional shares with the Nasdaq Capital Market.

(h) *No Objection.* FINRA has confirmed that it has not raised any objection with respect to the fairness and reasonableness of the underwriting terms and arrangements relating to the offering of the Securities.

(i) *Additional Documents.* At the Closing Time, counsel for the Placement Agent shall have been furnished with such documents and opinions as they may reasonably require for the purpose of enabling them to pass upon the issuance and sale of the Securities as herein contemplated, or in order to evidence the accuracy of any of the representations or warranties, or the fulfillment of any of the conditions, herein contained; and all proceedings taken by the Company in connection with the issuance and sale of the Securities as herein contemplated shall be reasonably satisfactory in form and substance to the Placement Agent and counsel for the Placement Agent.

(j) *Termination of Agreement.* If any condition specified in this Section shall not have been fulfilled when and as required to be fulfilled, this Agreement may be terminated by the Placement Agent by notice to the Company at any time at or prior to Closing Time, and such termination shall be without liability of any party to any other party except as provided in Section 4 and except that Sections 2, 4, 6, 7, 8, 14, 15 and 16 shall survive any such termination and remain in full force and effect.

(k) *Securities Purchase Agreements.* Prior to the Closing Date, the Company shall have furnished to the Placement Agent executed copies of the Securities Purchase Agreement entered into by the Company and Purchasers for the sale of the Securities.

(l) *Lock-Up Agreements.* Prior to the Closing Date, the Company shall have furnished to the Placement Agent executed copies of the Lock-Up Agreements entered into by all of the Company's directors and officers.

(m) *CFO Certificate.* At the time of the execution of this Agreement and on the Closing Date, the Company shall have furnished to the Placement Agent a certificate of its Chief Financial Officer, in the form and substance satisfactory to the Placement Agent.

SECTION 6. Indemnification.

(a) *Indemnification of Placement Agents.* The Company agrees to indemnify and hold harmless the Placement Agent, its affiliates (as such term is defined in Rule 501(b) under the 1933 Act (each, an "Affiliate")), its selling agents and each person, if any, who controls the Placement Agent within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act as follows:

(i) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, arising out of any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereto), including any information deemed to be a part thereof pursuant to Rule 430B, or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading or arising out of any untrue statement or alleged untrue statement of a material fact included (A) in any preliminary prospectus, any Issuer Free Writing Prospectus, any Written Testing-the-Waters Communication, the General Disclosure Package or the Prospectus (or any amendment or supplement thereto), or (B) in any materials or information provided to investors by, or with the approval of, the Company in connection with the marketing of the offering of the Securities ("Marketing Materials"), including any roadshow or investor presentations made to investors by the Company (whether in person or electronically), or the omission or alleged omission in any preliminary prospectus, any Issuer Free Writing Prospectus, any Written Testing-the-Waters Communication, the General Disclosure Package, the Prospectus (or any amendment or supplement thereto) or in any Marketing Materials of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(ii) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, to the extent of the aggregate amount paid in settlement of any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or of any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission; provided that (subject to Section 6(d) below) any such settlement is effected with the written consent of the Company;

(iii) against any and all expense whatsoever, as incurred (including the reasonable fees and disbursements of counsel chosen by the Placement Agent), reasonably incurred in investigating, preparing or defending against any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission, to the extent that any such expense is not paid under (i) or (ii) above.

(b) *Actions against Parties; Notification.* Each indemnified party shall give notice as promptly as reasonably practicable to each indemnifying party of any action commenced against it in respect of which indemnity may be sought hereunder, but failure to so notify an indemnifying party shall not relieve such indemnifying party from any liability hereunder to the extent it is not materially prejudiced as a result thereof and in any event shall not relieve it from any liability which it may have otherwise than on account of this indemnity agreement. In the case of parties indemnified pursuant to Section 6(a) above, counsel to the indemnified parties shall be selected by the Placement Agent, and, in the case of parties indemnified pursuant to Section 6(b) above, counsel to the indemnified parties shall be selected by the Company. An indemnifying party may participate at its own expense in the defense of any such action; provided, however, that counsel to the indemnifying party shall not (except with the consent of the indemnified party) also be counsel to the indemnified party. In no event shall the indemnifying parties be liable for the reasonable fees and expenses of more than one counsel (in addition to any local counsel) separate from their own counsel for all indemnified parties in connection with any one action or separate but similar or related actions in the same jurisdiction arising out of the same general allegations or circumstances. No indemnifying party shall, without the prior written consent of the indemnified parties, settle or compromise or consent to the entry of any judgment with respect to any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever in respect of which indemnification or contribution could be sought under this Section 6 or Section 7 hereof (whether or not the indemnified parties are actual or potential parties thereto), unless such settlement, compromise or consent (i) includes an unconditional release of each indemnified party from all liability arising out of such litigation, investigation, proceeding or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(c) *Settlement without Consent if Failure to Reimburse.* If at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 6(a)(ii) effected without its written consent if (i) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request, (ii) such indemnifying party shall have received notice of the terms of such settlement at least 30 days prior to such settlement being entered into and (iii) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

SECTION 7. Contribution.

(a) If the indemnification provided for in Section 6 hereof is for any reason unavailable to or insufficient to hold harmless an indemnified party in respect of any losses, liabilities, claims, damages or expenses referred to therein, then each indemnifying party shall contribute to the aggregate amount of such losses, liabilities, claims, damages and expenses incurred by such indemnified party, as incurred, (i) in such proportion as is appropriate to reflect the relative benefits received by the Company, on the one hand, and the Placement Agent, on the other hand, from the offering of the Securities pursuant to this Agreement or (ii) if the allocation provided by clause (i) is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company, on the one hand, and of the Placement Agent, on the other hand, in connection with the statements or omissions which resulted in such losses, liabilities, claims, damages or expenses, as well as any other relevant equitable considerations.

(b) The relative benefits received by the Company, on the one hand, and the Placement Agent, on the other hand, in connection with the offering of the Securities pursuant to this Agreement shall be deemed to be in the same respective proportions as the total net proceeds from the offering of the Securities pursuant to this Agreement (before deducting expenses) received by the Company, on the one hand, and the total placement agent fee received by the Placement Agent, on the other hand, in each case as set forth on the cover of the Prospectus, bear to the aggregate initial public offering price of the Securities as set forth on the cover of the Prospectus.

(c) The relative fault of the Company, on the one hand, and the Placement Agent, on the other hand, shall be determined by reference to, among other things, whether any such untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or by the Placement Agent and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

(d) The Company and the Placement Agent agree that it would not be just and equitable if contribution pursuant to this Section 7 were determined by pro rata allocation or by any other method of allocation which does not take account of the equitable considerations referred to above in this Section 7. The aggregate amount of losses, liabilities, claims, damages and expenses incurred by an indemnified party and referred to above in this Section 7 shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in investigating, preparing or defending against any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever based upon any such untrue or alleged untrue statement or omission or alleged omission.

(e) Notwithstanding the provisions of this Section 7, the Placement Agent shall not be required to contribute any amount in excess of the Placement Fee received by the Placement Agent in connection with the Securities placed by it and distributed to the Investors.

(f) No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the 1933 Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

(g) For purposes of this Section 7, each person, if any, who controls the Placement Agent within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act and the Placement Agent's Affiliates and selling agents shall have the same rights to contribution as the Placement Agent, and each director of the Company, each officer of the Company who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act shall have the same rights to contribution as the Company.

SECTION 8. Representations, Warranties and Agreements to Survive. All representations, warranties and agreements contained in this Agreement or in certificates of officers of the Company or any of its Subsidiaries submitted pursuant hereto, shall remain operative and in full force and effect regardless of (i) any investigation made by or on behalf of the Placement Agent or its Affiliates or selling agents, any person controlling the Placement Agent, its officers or directors or any person controlling the Company and (ii) delivery of and payment for the Securities.

SECTION 9. Termination of Agreement.

(a) *Termination.* The Placement Agent may terminate this Agreement, by notice to the Company, at any time at or prior to the Closing Time (i) if there has been, in the judgment of the Placement Agent, since the time of execution of this Agreement or since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package or the Prospectus, any Material Adverse Effect, or (ii) if there has occurred any material adverse change in the financial markets in the United States or the international financial markets, any outbreak of hostilities or escalation thereof or other calamity or crisis or any change or development involving a prospective change in U.S. or international political, financial or economic conditions, in each case the effect of which is such as to make it, in the judgment of the Placement Agent, impracticable or inadvisable to proceed with the completion of the offering or to enforce contracts for the sale of the Securities, or (iii) if trading in any securities of the Company has been suspended or materially limited by the Commission or the Nasdaq Capital Market, or (iv) if trading generally on the NYSE American or the New York Stock Exchange or in the Capital Global Market has been suspended or materially limited, or minimum or maximum prices for trading have been fixed, or maximum ranges for prices have been required, by any of said exchanges or by order of the Commission, FINRA or any other governmental authority, or (v) a material disruption has occurred in commercial banking or securities settlement or clearance services in the United States or with respect to Clearstream or Euroclear systems in Europe, or (vi) if a banking moratorium has been declared by either Federal or New York authorities.

(b) *Liabilities.* If this Agreement is terminated pursuant to this Section, such termination shall be without liability of any party to any other party except as provided in Section 4 hereof, and provided further that Sections 2, 4, 6, 7, 8, 14, 15 and 16 shall survive such termination and remain in full force and effect.

SECTION 10. Notices. All notices and other communications hereunder shall be in writing and shall be deemed to have been duly given if mailed or transmitted by any standard form of telecommunication. Notices to the Placement Agents shall be directed to TD Securities (USA) LLC at 1 Vanderbilt Avenue, New York, New York, 10017, attention: Head of Equity Capital Markets, with a copy to CIBLegal@tdsecurities.com.

SECTION 11. No Advisory or Fiduciary Relationship. The Company hereby acknowledges that the Placement Agent is acting solely as an independent contractor with respect to providing investment banking services to the Company, including the offering of the Securities contemplated hereby (including in connection with determining the terms of the Offering). The Company further acknowledges that in no event do the parties intend that the Placement Agent act or be responsible as a fiduciary to the Company, its management, shareholders, creditors or any other person in connection with any activity that the Placement Agent may undertake or have undertaken in furtherance of the offering of the Company's securities, either before or after the date hereof. The Placement Agent hereby expressly disclaims any fiduciary or similar obligations to the Company, either in connection with the transactions contemplated by this Agreement or any matters leading up to such transactions, and the Company hereby confirms its understanding and agreement to that effect. The Company and the Placement Agent agree that they are each responsible for making their own independent judgments with respect to any such transactions, and that any opinions or views expressed by the Placement Agent to the Company regarding such transactions, including but not limited to any opinions or views with respect to the price or market for the Company's securities, do not constitute advice or recommendations to the Company. The Company hereby waives and releases, to the fullest extent permitted by law, any claims that the Company may have against the Placement Agent with respect to any breach or alleged breach of any fiduciary or similar duty to the Company in connection with the transactions contemplated by this Agreement or any matters leading up to such transactions. The Company further acknowledges and agrees the Placement Agent has neither advised, nor is it advising, the Company or any other person as to any legal, tax, investment, accounting or regulatory matters in any jurisdiction with respect to the transactions contemplated hereby. The Company shall consult with its own advisors concerning such matters and shall be responsible for making its own independent investigation and appraisal of the transactions contemplated hereby, and the Placement Agent shall not have any responsibility or liability to the Company with respect thereto. Any review by the Placement Agent of the Company, the transactions contemplated hereby or other matters relating to such transactions has been and will be performed solely for the benefit of the Placement Agent and has not been and shall not be performed on behalf of the Company or any other person. It is understood that Placement Agent has not and will not be rendering an opinion to the Company as to the fairness of the terms of the Offering.

SECTION 12. Parties. This Agreement shall each inure to the benefit of and be binding upon the Placement Agent and the Company and their respective successors. Nothing expressed or mentioned in this Agreement is intended or shall be construed to give any person, firm or corporation, other than the Placement Agent and the Company and their respective successors and the controlling persons and officers and directors referred to in Sections 6 and 7 and their heirs and legal representatives, any legal or equitable right, remedy or claim under or in respect of this Agreement or any provision herein contained. This Agreement and all conditions and provisions hereof are intended to be for the sole and exclusive benefit of the Placement Agent and the Company and their respective successors, and said controlling persons and officers and directors and their heirs and legal representatives, and for the benefit of no other person, firm or corporation. No purchaser of Securities from the Placement Agent shall be deemed to be a successor by reason merely of such purchase.

SECTION 13. Waiver of Trial by Jury. The Company (on its behalf and, to the extent permitted by applicable law, on behalf of its stockholders and affiliates) and the Placement Agent hereby irrevocably waive, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

SECTION 14. GOVERNING LAW. 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 WITHOUT REGARD TO ITS CHOICE OF LAW PROVISIONS.

SECTION 15. Consent to Jurisdiction; Waiver of Immunity. Any legal suit, action or proceeding arising out of or based upon this Agreement or the transactions contemplated hereby shall be instituted in (i) the federal courts of the United States of America located in the City and County of New York, Borough of Manhattan or (ii) the courts of the State of New York located in the City and County of New York, Borough of Manhattan (collectively, the “Specified Courts”), and each party irrevocably submits to the exclusive jurisdiction (except for proceedings instituted in regard to the enforcement of a judgment of any such court, as to which such jurisdiction is non-exclusive) of such courts in any such suit, action or proceeding. Service of any process, summons, notice or document by mail to such party’s address set forth above shall be effective service of process for any suit, action or other proceeding brought in any such court. The parties irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the Specified Courts and irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such suit, action or other proceeding brought in any such court has been brought in an inconvenient forum.

SECTION 16. TIME. TIME SHALL BE OF THE ESSENCE OF THIS AGREEMENT. EXCEPT AS OTHERWISE SET FORTH HEREIN, SPECIFIED TIMES OF DAY REFER TO NEW YORK CITY TIME.

SECTION 17. Partial Unenforceability. The invalidity or unenforceability of any Section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other Section, paragraph or provision hereof. If any Section, paragraph or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

SECTION 18. Counterparts. This Agreement may be executed in any number of counterparts (which may include counterparts delivered by any standard form of telecommunication), each of which shall be deemed to be an original, but all such counterparts shall together constitute one and the same agreement.

SECTION 19. Effect of Headings. The Section headings herein are for convenience only and shall not affect the construction hereof.

SECTION 20. Entire Agreement. This Agreement supersedes all prior agreements and understandings (whether written or oral) between the Company and the Placement Agent, with respect to the subject matter hereof.

[SIGNATURE PAGES FOLLOW]

If the foregoing is in accordance with your understanding of our agreement, please sign and return to the Company a counterpart hereof, whereupon this instrument, along with all counterparts, will become a binding agreement between each Placement Agent and the Company in accordance with its terms.

Very truly yours,

TONIX PHARMACEUTICALS HOLDING CORP.

By: /s/ Seth Lederman
Name: Seth Lederman
Title: Chief Executive Officer

[SIGNATURE PAGE TO PLACEMENT AGENCY AGREEMENT]

CONFIRMED AND ACCEPTED
As of the date first above written:

TD SECURITIES (USA) LLC

By: /s/ Bill Kadel
 Name: Bill Kadel
 Title: Managing Director

[SIGNATURE PAGE TO PLACEMENT AGENCY AGREEMENT]

SCHEDULE A-1

Pricing Terms

1. The Company is selling 615,025 shares of Common Stock.
 2. The offering price per Share shall be \$16.26.
 3. The Company is selling Pre-Funded Warrants to purchase up to 615,025 shares of Common Stock.
 4. The offering price per Pre-Funded Warrant shall be \$16.259.
 5. The Placement Agency Fee shall be \$0.9756 per share and \$0.9756 per Pre-Funded Warrant for a total of \$1,200,036.78.
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SCHEDULE A-2

Free Writing Prospectuses

None.

SCHEDULE A-3

List of Written Testing-the-Waters Communications

None.

**PRE-FUNDED WARRANT
TO PURCHASE SHARES OF COMMON STOCK
TONIX PHARMACEUTICALS HOLDING CORP.**

Warrant Shares:

Original Issuance Date: December 30, 2025

THIS PRE-FUNDED WARRANT TO PURCHASE SHARES OF COMMON STOCK (this “Warrant”) certifies that, for value received, [•] or its assigns (the “Holder”) is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date hereof (the “Initial Exercise Date”) until this Warrant is exercised in full (the “Termination Date”), to subscribe for and purchase from **TONIX PHARMACEUTICALS HOLDING CORP.**, a Nevada corporation (the “Company”), up to [•] shares of Common Stock, par value \$0.001 per share (the “Common Stock”), of the Company (as subject to adjustment hereunder, the “Warrant Shares”). The purchase price of one Warrant Share under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b).

1. Definitions. Capitalized terms used and not otherwise defined herein shall have the meanings set forth in that certain Securities Purchase Agreement (the “Agreement”), dated December 29, 2025, among the Company and the purchasers signatory thereto.

2. Exercise.

(a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company of a duly executed facsimile copy or PDF copy submitted by e-mail (or e-mail attachment) of the Notice of Exercise in the form annexed hereto (the “Notice of Exercise”). Within the earlier of (i) one (1) Trading Day and (ii) the number of Trading Days comprising the Standard Settlement Period (as defined in Section 2(d)(i) herein) following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the Warrant Shares specified in the applicable Notice of Exercise by wire transfer or cashier’s check drawn on a United States bank unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation as soon as reasonably practicable following the date on which the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Business Day of receipt of such notice. Notwithstanding the foregoing, with respect to any Notice(s) of Exercise delivered on or prior to 12:00 p.m. (New York City time) on the Initial Exercise Date, which may be delivered at any time after the time of execution of the Agreement, the Company agrees to deliver, or cause to be delivered, the Warrant Shares subject to such notice(s) by 4:00 p.m. (New York City time) on the Initial Exercise Date, and the Initial Exercise Date shall be the Warrant Share Delivery Date (as defined below) for purposes hereunder, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received by such Warrant Share Delivery Date. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

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

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

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

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

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

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

"Bid Price" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the bid price of the Common Stock for the time in question (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the VWAP of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on The Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holder and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

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

(d) Mechanics of Exercise

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

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

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

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

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

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

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

(viii) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with (i) the Holder's Affiliates, (ii) any other Persons acting as a group together with the Holder or any of the Holder's Affiliates, and (iii) any other Persons whose beneficial ownership of shares of Common Stock would or could be aggregated with the Holder's for the purposes of Section 13(d) (such Persons, "Attribution Parties")), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of Warrant Shares issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. For purposes of this Section 2(d)(viii), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(d)(viii) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, and the Company shall have no obligation to verify or confirm the accuracy of such determination. For purposes of this Section 2(d)(viii), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Securities and Exchange Commission (the "Commission"), as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within one Trading Day confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall be 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of the Warrant Shares issuable upon exercise of this Warrant. The Holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 2(d)(viii), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of Warrant Shares upon exercise of this Warrant held by the Holder and the provisions of this Section 2(d)(viii) shall continue to apply. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(d)(viii) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant. If the Warrant is unexercisable as a result of the Holder's Beneficial Ownership Limitation, no alternate consideration is owing to the Holder.

3. Certain Adjustments.

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

(b) [RESERVED]

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

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

(e) Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company (or any Subsidiary), directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of the Company's assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the voting power of the common equity of the Company, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off, merger or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires 50% or more of the voting power of the common equity of the Company, (each, a "Fundamental Transaction"), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the "Alternate Consideration") receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. The Company shall cause any successor entity to the Company, surviving entity or other Person, including any Purchaser of assets of the Company in a Fundamental Transaction in which the Company is not the survivor (the "Successor Entity") to assume in writing all of the obligations of the Company under this Warrant and the other Transaction Documents in accordance with the provisions of this Section 3(e) pursuant to written agreements in form and substance reasonably satisfactory to the Holder prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall be added to the term "Company" under this Warrant (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant and the other Transaction Documents referring to the "Company" shall refer instead to each of the Company and the Successor Entity or Successor Entities, jointly and severally), and may exercise every right and power of the Company and the Successor Entity or Successor Entities shall assume all of the obligations of the Company under this Warrant and the other Transaction Documents with the same effect as if the Company and such Successor Entity or Successor Entities, jointly and severally, had been named as the Company herein. The provisions of this paragraph (e) shall similarly apply to subsequent transactions analogous to a Fundamental Transaction type.

(f) [RESERVED]

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

(h) Notice to Holder.

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

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

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

4. Transfer of Warrant.

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

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

(c) Warrant Register. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the “Warrant Register”), in the name of the record Holder hereof from time to time. The Company 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.

5. Miscellaneous.

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

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

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

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

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its 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 (i) not increase the par value of any shares of Common Stock above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable shares of Common Stock upon the exercise of this Warrant and (iii) 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.

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

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

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

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

(h) Notices. Any notice, request or other document required or permitted to be given or delivered to the Holder by the Company shall be delivered in accordance with the notice provisions of the Agreement.

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

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

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

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

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

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

(Signature Page Follows)

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

TONIX PHARMACEUTICALS HOLDING CORP.

By: _____
Name: _____
Title: _____

EXHIBIT A

NOTICE OF EXERCISE

TO: TONIX PHARMACEUTICALS HOLDING CORP.

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

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

☐ in lawful money of the United States; or

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

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

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

[SIGNATURE OF HOLDER]

Name of Investing Entity:

Signature of Authorized Signatory of Investing Entity:

Name of Authorized Signatory:

Title of Authorized Signatory:

Date:

EXHIBIT B

ASSIGNMENT FORM

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

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

Name:

(Please Print)

Address:

(Please Print)

Phone Number:

Email Address:

Dated:

Holder's Signature:

Holder's Address:



Brownstein Hyatt Farber Schreck, LLP

702.382.2101 main
100 North City Parkway, Suite 1600
Las Vegas, Nevada 89106

December 29, 2025

Tonix Pharmaceuticals Holding Corp.
26 Main Street, Suite 101
Chatham, New Jersey 079285

To the addressee set forth above:

We have acted as local Nevada counsel to Tonix Pharmaceuticals Holding Corp., a Nevada corporation (the "Company"), in connection with the issuance and sale by the Company of (i) 615,025 shares (the "Common Shares") of the Company's common stock, par value \$0.001 per share (the "Common Stock"), and (ii) pre-funded warrants (the "Warrants") to purchase up to 615,025 shares of Common Stock (the "Warrant Shares" and together with the Common Shares, the "Shares"), under that certain Placement Agency Agreement, dated December 29, 2025 (the "Placement Agency Agreement"), by and between TD Securities (USA) LLC, as placement agent (in such capacity, the "Placement Agent"), and the Company, and pursuant to that certain Securities Purchase Agreement, dated as of December 29, 2025 (the "Purchase Agreement" and together with the Placement Agency Agreement and the Warrants, the "Transaction Documents"), by and between the Company and the Purchaser (as defined therein) party thereto, all as more fully described in the Registration Statement on Form S-3 (File No. 333-287965) (the "Registration Statement"), including the base prospectus, dated September 4, 2025, as supplemented by the prospectus supplement, dated December 29, 2025 (as so supplemented, the "Prospectus"), each as filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Act"). The Shares and the Warrants are hereinafter collectively referred to as the "Securities". This opinion letter is being furnished at your request in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Act.

In our capacity as such counsel, we are familiar with the proceedings taken and proposed to be taken by the Company in connection with the authorization, issuance and sale of the Securities as contemplated by the Transaction Documents and as described in the Registration Statement and the Prospectus. For purposes of this opinion letter, and except to the extent set forth in the opinions expressed below, we have assumed that all such proceedings have been or will be timely completed in the manner presently proposed in the Transaction Documents, the Registration Statement and the Prospectus.

For purposes of issuing this opinion letter, (a) we have made such legal and factual examinations and inquiries, including an examination of originals or copies certified or otherwise identified to our satisfaction as being true copies of (i) the Registration Statement and the Prospectus, (ii) the Transaction Documents; (iii) the articles of incorporation and bylaws of the Company, each as amended to date; and (iv) such agreements, instruments, resolutions of the board of directors of the Company and committees thereof and other corporate records, and such instruments and other documents, as we have deemed necessary or appropriate, and (b) we have obtained from officers and other representatives and agents of the Company, and from public officials, and have relied upon, such certificates, representations and assurances, and public filings, as we have deemed necessary or appropriate.

Without limiting the generality of the foregoing, in our examination, we have, with your permission, assumed without independent verification, that: (i) the statements of fact and all representations and warranties set forth in the Transaction Documents and in any other documents we have reviewed are, and when any Securities are issued will be, true and correct as to factual matters, in each case as of the date or dates of such documents and as of the date hereof; (iii) each natural person executing a document at all relevant times had, has, or at the time of such execution will have, sufficient legal capacity to do so; (iv) all documents submitted to us as originals are authentic, the signatures on all documents that we have examined are genuine and all documents submitted to us as certified, conformed, photostatic, facsimile or electronic copies conform to the original document; (v) all corporate records made available to us by the Company, and all public records we have reviewed, are accurate and complete; (vi) the obligations of each party set forth in the Transaction Documents and in any other documents we have reviewed are, and when any Securities are issued will be, its valid and binding obligations, enforceable against such party in accordance with their respective terms; and (vii) after any issuance of Warrant Shares, the total number of issued and outstanding shares of Common Stock, together with the total number of shares of Common Stock then reserved for issuance or obligated to be issued by the Company pursuant to any agreement, arrangement, plan or otherwise, will not exceed the total number of shares of Common Stock then authorized under the Company's articles of incorporation.

We are qualified to practice law in the State of Nevada. The opinions set forth herein are expressly limited to and based exclusively on the general corporate laws of the State of Nevada, and we do not purport to be experts on, or to express any opinion with respect to the applicability or effect of, the laws of any other jurisdiction. We express no opinion concerning, and we assume no responsibility as to laws or judicial decisions related to, or any orders, consents or other authorizations or approvals as may be required by, any federal laws, rules or regulations, including, without limitation, any federal securities laws, rules or regulations, or any state securities or "blue sky" laws, rules or regulations.

Based upon the foregoing, and in reliance thereon, and having regard to legal considerations and other information that we deem relevant, we are of the opinion that:

1. The Warrants have been duly authorized by the Company.
 2. The Common Shares have been duly authorized by the Company, and if, when and to the extent any Common Shares are issued and sold in accordance with all applicable terms and conditions set forth in, and in the manner contemplated by, the relevant Transaction Documents, and as described in the Registration Statement and Prospectus (including payment in full of any and all consideration required for such Shares), such Common Shares will be validly issued, fully paid and nonassessable.
-

3. The Warrant Shares have been duly authorized by the Company, and if, when and to the extent any Warrant Shares are issued in accordance with all applicable terms and conditions of, and in the manner contemplated by, the relevant Transaction Documents, and as described in the Registration Statement and Prospectus (including due and proper exercise of the relevant Warrant(s) in accordance therewith and payment in full of any and all consideration for such Warrant Shares as required thereunder), such Warrant Shares will be validly issued, fully paid and nonassessable.

The opinions expressed herein are based upon the applicable laws of the State of Nevada and the facts in existence on the date of this opinion letter. In delivering this opinion letter to you, we disclaim any obligation to update or supplement the opinions set forth herein or to apprise you of any changes in any laws or facts after such time as the Registration Statement is declared effective. No opinion is offered or implied as to any matter, and no inference may be drawn, beyond the strict scope of the specific issues expressly addressed by the opinions set forth herein.

We hereby consent to the filing of this opinion letter as an exhibit to the Current Report on Form 8-K being filed on the date hereof and incorporated by reference into the Registration Statement and to the reference to our firm in the Prospectus under the heading "Legal Matters". In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission promulgated thereunder. Subject to all of the qualifications, limitations, restrictions, exceptions and assumptions set forth herein, Lowenstein Sandler LLP may rely on this opinion letter as if it were an addressee hereof on this date for the sole purpose of issuing its opinion letter to the Company relating to the validity of the Warrants, as filed with the Commission as an exhibit to the Current Report on Form 8-K being filed on the date hereof.

Very truly yours,

/s/ Brownstein Hyatt Farber Schreck, LLP



December 29, 2025

Tonix Pharmaceuticals Holding Corp.
26 Main Street – Suite 101
Chatham, NJ 07928

Ladies and Gentlemen:

We have acted as counsel to Tonix Pharmaceuticals Holding Corp., a Nevada corporation (the “**Company**”), in connection with the sale and issuance of (i) 615,025 shares (the “**Shares**”) of the Company’s common stock, par value \$0.001 per share (the “**Common Stock**”), and (ii) pre-funded warrants (the “**Pre-Funded Warrants**”) to purchase 615,025 shares of Common Stock (the “**Pre-Funded Warrant Shares**”), pursuant to the Registration Statement on Form S-3 (Registration No. 333-287965) (the “**Registration Statement**”), as amended, filed by the Company with the Securities and Exchange Commission (the “**Commission**”) under the Securities Act of 1933, as amended (the “**Securities Act**”), the related base prospectus (the “**Base Prospectus**”) contained therein and the prospectus supplement dated December 29, 2025 (together with the Base Prospectus, the “**Prospectus**”). The Shares, Pre-Funded Warrants and Pre-Funded Warrant Shares are to be sold pursuant to a Securities Purchase Agreement, dated December 29, 2025, between the Company and the purchaser signatory thereto (the “**Purchaser**”).

As counsel to the Company in connection with the proposed potential issuance and sale of the above-referenced Shares, Pre-Funded Warrants and Pre-Funded Warrant Shares, we have reviewed the Registration Statement, Prospectus and the respective exhibits thereto. We have also reviewed such corporate documents and records of the Company, such certificates of public officials and officers of the Company and such other matters as we have deemed necessary or appropriate for purposes of this opinion. In our examination, we have assumed: (i) the authenticity of original documents and the genuineness of all signatures; (ii) the conformity to the originals of all documents submitted to us as copies; (iii) the truth, accuracy and completeness of the information, representations and warranties contained in the instruments, documents, certificates and records we have reviewed; (iv) that, as set forth in a separate opinion delivered to the Company on the date hereof by Brownstein Hyatt Farber Schreck, LLP, special Nevada counsel to the Company, the Pre-Funded Warrants have been duly authorized for execution and delivery by the Company; and (v) the legal capacity for all purposes relevant hereto of all natural persons and, with respect to all parties to agreements or instruments relevant hereto other than the Company, that such parties had the requisite power and authority (corporate or otherwise) to execute, deliver and perform such agreements or instruments, that such agreements or instruments have been duly authorized by all requisite action (corporate or otherwise), executed and delivered by such parties and that such agreements or instruments are the valid, binding and enforceable obligations of such parties. As to any facts material to the opinions expressed herein that were not independently established or verified, we have relied upon oral or written statements and representations of officers and other representatives of the Company.

Based on the foregoing, and subject to the assumptions, limitations and qualifications set forth herein, we are of the opinion that when the Pre-Funded Warrants are duly executed and delivered by the Company and paid for by the Purchaser pursuant to the Purchase Agreement, such Pre-Funded Warrants will constitute the legal, valid and binding obligation of the Company, enforceable against the Company in accordance with their terms.

The opinion set forth above is subject to the following exceptions, limitations and qualifications: (i) the effect of bankruptcy, insolvency, reorganization, fraudulent conveyance, moratorium or other similar laws now or hereafter in effect relating to or affecting the rights and remedies of creditors; (ii) the effect of general principles of equity, including without limitation, concepts of materiality, reasonableness, good faith and fair dealing and the possible unavailability of specific performance or injunctive relief, regardless of whether enforcement is considered in a proceeding in equity or at law, and the discretion of the court before which any proceeding therefor may be brought; and (iii) the unenforceability under certain circumstances under law or court decisions of provisions providing for the indemnification of, or contribution to, a party with respect to liability where such indemnification or contribution is contrary to public policy. We express no opinion concerning the enforceability of any waiver of rights or defenses with respect to stay, extension or usury laws.

Our opinion is limited to the laws of New York. We express no opinion as to the effect of the law of any other jurisdiction. Our opinion is rendered as of the date hereof, and we assume no obligation to advise you of changes in law or fact (or the effect thereof on the opinions expressed herein) that hereafter may come to our attention. We advise you that matters of Nevada law are covered in the opinion of Brownstein Hyatt Farber Schreck, LLP, special Nevada counsel for the Company, in Exhibit 5.01 to the Current Report on Form 8-K filed by the Company on the date hereof.

We hereby consent to the inclusion of this opinion as Exhibit 5.02 to the Current Report on Form 8-K filed by the Company on the date hereof and to the references to our firm under the caption “Legal Matters” in the Prospectus which is a part of 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 promulgated thereunder.

Very truly yours,

/s/ Lowenstein Sandler LLP

LOWENSTEIN SANDLER LLP

SECURITIES PURCHASE AGREEMENT

This Securities Purchase Agreement (this “Agreement”) is dated as of December 29, 2025, between Tonix Pharmaceuticals Holding Corp., a Nevada corporation (the “Company”), and each purchaser identified on the signature pages hereto (each, including its successors and assigns, a “Purchaser” and collectively the “Purchasers”).

WHEREAS, subject to the terms and conditions set forth in this Agreement and pursuant to an effective registration statement under the Securities Act (as defined below), the Company desires to issue and sell to each Purchaser, and each Purchaser, severally and not jointly, desires to purchase from the Company, securities of the Company as more fully described in this Agreement.

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

**ARTICLE I.
DEFINITIONS**

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

“Acquiring Person” shall have the meaning ascribed to such term in Section 4.5.

“Action” shall have the meaning ascribed to such term in Section 3.1(j).

“Affiliate” means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person as such terms are used in and construed under Rule 405 under the Securities Act.

“Board of Directors” means the board of directors of the Company.

“Business Day” means any day other than Saturday, Sunday, or other day on which banking institutions in the State of New York are authorized or required by law to remain closed.

“Closing” means the closing of the purchase and sale of the Securities pursuant to Section 2.1.

“Closing Date” means the Trading Day on which all of the Transaction Documents have been executed and delivered by the applicable parties thereto, and all conditions precedent to (i) the Purchasers’ obligations to pay the Subscription Amount at the Closing and (ii) the Company’s obligations to deliver the Securities, in each case, at the Closing have been satisfied or waived, but in no event later than the second (2nd) Trading Day following the date hereof.

“Commission” means the United States Securities and Exchange Commission.

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

“Company Counsel” means Lowenstein Sandler LLP, with offices located at One Lowenstein Drive, Roseland, NJ 07068.

“Disclosure Time” means, (i) if this Agreement is signed on a day that is not a Trading Day or after 9:00 a.m. (New York City time) and before midnight (New York City time) on any Trading Day, 9:01 a.m. (New York City time) on the Trading Day immediately following the date hereof, unless otherwise instructed as to an earlier time by the Placement Agent, and (ii) if this Agreement is signed between midnight (New York City time) and 9:00 a.m. (New York City time) on any Trading Day, no later than 9:01 a.m. (New York City time) on the date hereof, unless otherwise instructed as to an earlier time by the Placement Agent.

“Evaluation Date” shall have the meaning ascribed to such term in Section 3.1(r).

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

“Exempt Issuance” means the issuance of (a) shares of Common Stock, restricted stock units or options to employees, consultants, officers, or directors of the Company pursuant to any share or option plan in existence as of the date hereof or subsequently approved by a vote of the shareholders of the Company, provided that such issuances to consultants are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights, (b) shares of Common Stock upon the exercise or exchange of or conversion of securities exercisable or exchangeable for or convertible into shares of Common Stock issued and outstanding on the date of this Agreement, provided that such securities have not been amended since the date of this Agreement to increase the number of such securities or to decrease the exercise price, exchange price or conversion price of such securities or to extend the term (but not, for purposes of clarity, the exercise period of stock options) of such securities, (c) securities issued pursuant to acquisitions or strategic transactions approved by a majority of the disinterested directors of the Company, provided that such securities are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights that require or permit the filing of any registration statement in connection therewith during the prohibition period in Section 4.10(a) herein, and provided that any such issuance shall only be to a Person (or to the equityholders of a Person), which is, itself or through its subsidiaries, an operating company or an owner of an asset in a business synergistic with the business of the Company and shall provide to the Company additional benefits in addition to the investment of funds, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities (for avoidance of doubt, securities issued to a venture arm of a strategic investor shall be deemed an “Exempt Issuance”), provided that such securities are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights during the prohibition period in Section 4.10(a) herein, (d) issuances of shares of Common Stock to consultants or vendors of the Company, provided that such securities are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights during the prohibition period in Section 4.10(a) herein; and (e) issuances of shares of Common Stock to existing holders of the Company’s securities in compliance with the terms of agreements entered into with, or instruments issued to, such holders, provided that such agreements regarding such securities have not been amended since the date of this Agreement to increase the number of such securities or to decrease the exercise price, exchange price or conversion price of such securities or to extend the term of such securities, and provided further that such securities are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights.

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

“GAAP” means generally accepted accounting principles in the United States.

“Indebtedness” shall have the meaning ascribed to such term in Section 3.1(aa).

“Intellectual Property Rights” shall have the meaning ascribed to such term in Section 3.1(o).

“Liens” means a lien, charge, pledge, security interest, encumbrance, right of first refusal, preemptive right or other restriction.

“Lock-Up Agreement” means each Lock-Up Agreement to be delivered by the directors and officers of the Company, in the form of Exhibit B attached hereto.

“Material Adverse Effect” shall have the meaning assigned to such term in Section 3.1(b).

“Material Permits” shall have the meaning ascribed to such term in Section 3.1(m).

“Per Share Purchase Price” equals \$16.26, subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of shares of Common Stock that occur between the date hereof and the Closing Date.

“Per Pre-Funded Warrant Purchase Price” equals the Per Share Purchase Price less \$0.001, subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions relating to shares of Common Stock that occur after the date of this Agreement.

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Placement Agent” means TD Securities (USA) LLC.

“Placement Agent Counsel” means Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., with offices located at 919 Third Avenue, New York, NY 10022.

“Placement Agency Agreement” means that certain placement agency agreement, dated as of the date hereof, by and between the Company and the Placement Agent.

“Pre-Funded Warrants” means, collectively, the warrants delivered to the Purchasers at Closing in accordance with Section 2.2(a) hereof, which Pre-Funded Warrants shall be exercisable immediately upon issuance and shall expire in accordance with the terms thereof, in the form of Exhibit A attached hereto.

“Proceeding” means an action, claim, suit, investigation or proceeding (including, without limitation, an informal investigation or partial proceeding, such as a deposition), whether commenced or threatened.

“Prospectus” means the final prospectus filed pursuant to the Registration Statement.

“Prospectus Supplement” means the prospectus supplement filed pursuant to the Registration Statement relating to the offering of Securities pursuant to this Agreement.

“Purchaser Party” shall have the meaning ascribed to such term in Section 4.8.

“Registration Statement” means the effective registration statement with the Commission on Form S-3 (File No. 333-287965), which registers the sale of the Securities and includes any Rule 462(b) Registration Statement.

“Required Approvals” shall have the meaning ascribed to such term in Section 3.1(c).

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

“Rule 424” means Rule 424 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

“Rule 462(b) Registration Statement” means any registration statement prepared by the Company registering additional Securities, which was filed with the Commission on or prior to the date hereof and became automatically effective pursuant to Rule 462(b) promulgated by the Commission pursuant to the Securities Act.

“SEC Reports” shall have the meaning ascribed to such term in Section 3.1(h).

“Securities” means the Shares, the Pre-Funded Warrants and the Warrant Shares.

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Shares” means the shares of Common Stock issued and issuable to each Purchaser pursuant to this Agreement.

“Short Sales” means all “short sales” as defined in Rule 200 of Regulation SHO under the Exchange Act (but shall not be deemed to include locating and/or borrowing shares of Common Stock).

“Subscription Amount” means, as to each Purchaser, the aggregate amount to be paid for the shares of Common Stock and Pre-Funded Warrants purchased hereunder as specified below such Purchaser’s name on the signature page of this Agreement and next to the heading “Subscription Amount,” in United States dollars and in immediately available funds.

“Subsidiary” means any subsidiary of the Company as set forth in the SEC Reports and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

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

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

“Transaction Documents” means this Agreement, the Pre-Funded Warrants, the Lock-Up Agreements, the Placement Agency Agreement, and all exhibits and schedules thereto and hereto and any other documents or agreements executed in connection with the transactions contemplated hereunder.

“Transfer Agent” means vStock Transfer, LLC, the current transfer agent of the Company, with a mailing address at 18 Lafayette Place, Woodmere, NY 11598.

“Variable Rate Transaction” shall have the meaning ascribed to such term in Section 4.10(b).

“Warrant Shares” means the shares of Common Stock issuable upon exercise of the Pre-Funded Warrants.

ARTICLE II. PURCHASE AND SALE

2.1 Closing. On the Closing Date, upon the terms and subject to the conditions set forth herein, substantially concurrent with the execution and delivery of this Agreement by the parties hereto, the Company agrees to sell, and the Purchasers, severally and not jointly, agree to purchase, the number of shares of Common Stock set forth under the heading “Subscription Amount” on the Purchaser’s signature page hereto, at the Per Share Purchase Price; provided, however, that, to the extent that a Purchaser determines, in its sole discretion, that such Purchaser (together with such Purchaser’s Affiliates, and any Person acting as a group together with such Purchaser or any of such Purchaser’s Affiliates) would beneficially own in excess of the Beneficial Ownership Limitation, or as such Purchaser may otherwise choose, in lieu of purchasing shares of Common Stock, such Purchaser may elect to purchase Pre-Funded Warrants in lieu of shares of Common Stock in such manner to result in the full Subscription Amount being paid by such Purchaser to the Company. The “Beneficial Ownership Limitation” shall be 4.99% (or, at the election of the Purchaser, 9.99%) of the number of shares of Common Stock, in each case, outstanding immediately after giving effect to the issuance of the Securities on the Closing Date. Notwithstanding anything to the contrary herein and a Purchaser’s Subscription Amount set forth on the signature pages attached hereto, the number of Shares purchased by a Purchaser (and its Affiliates) hereunder shall not, when aggregated with all other shares of Common Stock owned by such Purchaser (and its Affiliates) at such time, result in such Purchaser beneficially owning (as determined in accordance with Section 13(d) of the Exchange Act) in excess of 9.9% of the then issued and outstanding Common Stock outstanding at the Closing (the “Beneficial Ownership Maximum”), and such Purchaser’s Subscription Amount, to the extent it would otherwise exceed the Beneficial Ownership Maximum immediately prior to the Closing, shall be conditioned upon the issuance of Shares at the Closing to the other Purchasers signatory hereto. To the extent that a Purchaser’s beneficial ownership of the Shares would otherwise be deemed to exceed the Beneficial Ownership Maximum, such Purchaser’s Subscription Amount shall automatically be reduced as necessary in order to comply with this paragraph.

Each Purchaser’s Subscription Amount as set forth on the signature page hereto executed by such Purchaser shall be delivered to the Company via wire transfer of immediately available funds pursuant to the wire instructions provided to such Purchaser pursuant to Section 2.2(a)(ii). The Company shall deliver to each Purchaser its respective Shares via The Depository Trust Company Deposit or Withdrawal at Custodian system (“DWAC”) registered in the name of such Purchaser in accordance with such Purchaser’s DWAC instructions, and Pre-Funded Warrants delivered to such Purchaser or its designee, and the Company and each Purchaser shall deliver the other items set forth in Section 2.2 at the Closing. Upon satisfaction of the covenants and conditions set forth in Sections 2.2 and 2.3, the Closing shall occur remotely via the exchange of documents and signatures or such other location as the parties shall mutually agree in writing. Notwithstanding anything herein to the contrary, if at any time on or after the time of execution of this Agreement by the Company and an applicable Purchaser through the Closing (the “Pre-Settlement Period”), such Purchaser sells to any Person all, or any portion, of any Shares to be issued hereunder to such Purchaser at the Closing (collectively, the “Pre-Settlement Shares”), such Person shall, automatically hereunder (without any additional required actions by such Purchaser or the Company), be deemed to be a Purchaser under this Agreement unconditionally bound to purchase, and the Company shall be deemed unconditionally bound to sell, such Pre-Settlement Shares to such Person at the Closing; provided, that the Company shall not be required to deliver any Pre-Settlement Shares to such Purchaser prior to the Company’s receipt of the Subscription Amount for such Pre-Settlement Shares hereunder; provided, further, that the Company hereby acknowledges and agrees that the forgoing shall not constitute a representation or covenant by such Purchaser as to whether or not such Purchaser will elect to sell any Pre-Settlement Shares during the Pre-Settlement Period. The decision to sell any Shares will be made in the sole discretion of such Purchaser from time to time, including during the Pre-Settlement Period.

The Pre-Funded Warrants shall be delivered to the Purchasers in definitive form, registered in such names and in such denominations as the purchasers of the Pre-Funded Warrants shall request in writing not later than the Closing Date. The Pre-Funded Warrants will be made available for inspection by the Placement Agent on the business day prior to the Closing Date. The Company and the Placement Agent shall instruct Purchasers to make payment for the Pre-Funded Warrants on the Closing Date to the Company by wire transfer in immediately available funds to the account specified by the Company at a purchase price of Per Pre-Funded Warrant Purchase Price, and the Company shall deliver such Pre-Funded Warrants to such Purchasers on the Closing Date in definitive form against such payment.

2.2 Deliveries.

- (a) On or prior to the Closing Date, the Company shall deliver or cause to be delivered to each Purchaser the following:
 - (i) this Agreement duly executed by the Company;
 - (ii) the Company's wire instructions, on Company letterhead and executed by the Company's Chief Executive Officer or Chief Financial Officer;
 - (iii) a copy of the irrevocable instructions to the Transfer Agent instructing the Transfer Agent to deliver on an expedited basis via The Depository Trust Company Deposit or Withdrawal at Custodian system shares of Common Stock equal to the portion of such Purchaser's Subscription Amount divided by the Per Share Purchase Price, registered in the name of such Purchaser;
 - (iv) for each Purchaser of Pre-Funded Warrants pursuant to Section 2.1, a Pre-Funded Warrant registered in the name of such Purchaser to purchase up to a number of shares of Common Stock equal to the portion of such Purchaser's Subscription Amount applicable to Pre-Funded Warrants divided by the sum of the Per Pre-Funded Warrant Purchase Price plus the exercise price per Warrant Share underlying such Pre-Funded Warrants, subject to adjustment therein;
 - (v) the Prospectus and the Prospectus Supplement (which may be delivered in accordance with Rule 172 under the Securities Act);
 - (vi) the duly executed Lock-Up Agreements;
 - (vii) a certificate executed by the Chief Executive Officer and Chief Financial Officer of the Company, dated as of the date of the Closing Date, in form and substance reasonably acceptable to the Purchasers and Placement Agent;
 - (viii) a certificate executed by the Secretary of the Company, dated as of the date of Closing, in form and substance reasonable acceptable to the Purchasers and Placement Agent;
 - (ix) a legal opinion of Company Counsel, in form reasonably acceptable to the Placement Agent and the Purchasers;
 - (x) a legal opinion of Haley Giuliano LLP, intellectual property counsel to the Company, in form reasonably acceptable to the Placement Agent and the Purchasers; and
 - (xi) a legal opinion of Brownstein Hyatt Farber Schreck, LLP, local Nevada counsel to the Company, in form reasonably acceptable to the Placement Agent and the Purchasers.
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- (b) On or prior to the Closing Date, each Purchaser shall deliver or cause to be delivered to the Company, the following:
 - (i) this Agreement duly executed by such Purchaser; and
 - (ii) such Purchaser's Subscription Amount with respect to the Securities purchased by such Purchaser, which shall be made available for DVP settlement with the Company or its designees.

2.3 Closing Conditions.

- (a) The obligations of the Company hereunder in connection with the Closing are subject to the following conditions being met:
 - (i) the accuracy in all material respects (or, to the extent representations or warranties are qualified by materiality or Material Adverse Effect, in all respects) when made and on the Closing Date of the representations and warranties of the Purchasers contained herein (unless as of a specific date therein in which case they shall be accurate in all material respects (or, to the extent representations or warranties are qualified by materiality or Material Adverse Effect, in all respects) as of such date);
 - (ii) all obligations, covenants and agreements of each Purchaser required to be performed at or prior to the Closing Date shall have been performed; and
 - (iii) the delivery by each Purchaser of the items set forth in Section 2.2(b) of this Agreement.
- (b) The respective obligations of the Purchasers hereunder in connection with the Closing are subject to the following conditions being met:
 - (i) the accuracy in all material respects (or, to the extent representations or warranties are qualified by materiality or Material Adverse Effect, in all respects) when made and on the Closing Date of the representations and warranties of the Company contained herein (unless as of a specific date therein in which case they shall be accurate in all material respects (or, to the extent representations or warranties are qualified by materiality or Material Adverse Effect, in all respects) as of such date);
 - (ii) all obligations, covenants and agreements of the Company required to be performed at or prior to the Closing Date shall have been performed;
 - (iii) the delivery by the Company of the items set forth in Section 2.2(a) of this Agreement;
 - (iv) there shall have been no Material Adverse Effect with respect to the Company since the date hereof; and
 - (v) from the date hereof to the Closing Date, trading in the Common Stock shall not have been suspended by the Commission or any Trading Market, and, at any time prior to the Closing Date, trading in securities generally as reported by Bloomberg L.P. shall not have been suspended or limited, or minimum prices shall not have been established on securities whose trades are reported by such service, or on any Trading Market, nor shall a banking moratorium have been declared either by the United States or New York State authorities nor shall there have occurred after the date of this Agreement any material outbreak or escalation of hostilities or other national or international calamity of such magnitude in its effect on, or any material adverse change in, any financial market which, in each case, in the reasonable judgment of such Purchaser, makes it impracticable or inadvisable to purchase the Securities at the Closing.

ARTICLE III. REPRESENTATIONS AND WARRANTIES

3.1 Representations and Warranties of the Company. The Company hereby makes the following representations and warranties to each Purchaser:

- (a) Subsidiaries. All of the direct and indirect subsidiaries of the Company are set forth in the SEC Reports (defined herein). The Company owns, directly or indirectly, all of the capital stock or other equity interests of each Subsidiary, free and clear of any Liens, and all of the issued and outstanding shares of capital stock of each Subsidiary are validly issued and are fully paid, non-assessable and free of preemptive and similar rights to subscribe for or purchase securities. There are no outstanding options, warrants, scrips or rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exercisable or exchangeable for, or giving any Person any right to subscribe for or acquire, any capital shares or equity interests, as applicable, of any Subsidiary, or contracts, commitments, understandings or arrangements by which any Subsidiary is or may become bound to issue capital shares or equity interests, as applicable. If the Company has no subsidiaries, all other references to the Subsidiaries or any of them in the Transaction Documents shall be disregarded.
- (b) Organization and Qualification. The Company and each of the Subsidiaries is an entity duly incorporated or otherwise organized, validly existing, and, if applicable under the laws of the jurisdiction in which they are formed, in good standing under the laws of the jurisdiction of its incorporation or organization, with the requisite power and authority to own and use its properties and assets and to carry on its business as currently conducted. Neither the Company nor any Subsidiary is in violation nor default of any of the provisions of its respective memorandum of association, articles of association, certificate or articles of incorporation, bylaws, operating agreement, or other organizational or charter documents. Each of the Company and the Subsidiaries is duly qualified to conduct business and is in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, could not have or reasonably be expected to result in: (i) a material adverse effect on the legality, validity or enforceability of any Transaction Document, (ii) a material adverse effect on the results of operations, assets, business, prospects or condition (financial or otherwise) of the Company and the Subsidiaries, taken as a whole, or (iii) a material adverse effect on the Company's ability to perform in any material respect on a timely basis its obligations under any Transaction Document (any of (i), (ii) or (iii), a "Material Adverse Effect") and no Proceeding has been instituted in any such jurisdiction revoking, limiting or curtailing or seeking to revoke, limit or curtail such power and authority or qualification.
- (c) Authorization; Enforcement. The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by this Agreement and each of the other Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of this Agreement and each of the other Transaction Documents by the Company and the consummation by it of the transactions contemplated hereby and thereby have been duly authorized by all necessary action on the part of the Company and no further action is required by the Company, the Board of Directors, a committee of the Board of Directors or the Company's shareholders in connection herewith or therewith other than in connection with the Required Approvals. This Agreement and each other Transaction Document to which it is a party has been (or upon delivery will have been) duly executed by the Company and, when delivered in accordance with the terms hereof and thereof, will constitute the valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.
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- (d) No Conflicts. The execution, delivery and performance by the Company of this Agreement and the other Transaction Documents to which it is a party, the issuance and sale of the Securities and the consummation by it of the transactions contemplated hereby and thereby do not and will not (i) conflict with or violate any provision of the Company's or any Subsidiary's memorandum of association, articles of association, certificate or articles of incorporation, bylaws, operating agreement, or other organizational or charter documents, or (ii) conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, result in the creation of any Lien upon any of the properties or assets of the Company or any Subsidiary, or give to others any rights of termination, amendment, anti-dilution or similar adjustments acceleration or cancellation (with or without notice, lapse of time or both) of, any agreement, credit facility, debt or other instrument (evidencing a Company or Subsidiary debt or otherwise) or other understanding to which the Company or any Subsidiary is a party or by which any property or asset of the Company or any Subsidiary is bound or affected, or (iii) subject to the Required Approvals, conflict with or result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any court or governmental authority to which the Company or a Subsidiary is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company or a Subsidiary is bound or affected; except in the case of each of clauses (ii) and (iii), such as could not have or reasonably be expected to result in a Material Adverse Effect.
- (e) Filings, Consents and Approvals. The Company is not required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state (including state blue sky laws), local or other governmental authority or other Person in connection with the execution, delivery and performance by the Company of the Transaction Documents, other than: (i) the filings required pursuant to Section 4.4 of this Agreement, (ii) the filing with the Commission of the Prospectus Supplement, (iii) notices and/or application(s) to and approvals by each applicable Trading Market for the listing of the applicable Securities for trading thereon in the time and manner required thereby, and (iv) filings required by the Financial Industry Regulatory Authority ("FINRA") (collectively, the "Required Approvals").
- (f) Issuance of the Securities; Registration. The Shares and Warrant Shares are duly authorized and, when issued and paid for in accordance with the applicable Transaction Documents, will be duly and validly issued, fully paid and non-assessable, free and clear of all Liens imposed by the Company. The Pre-Funded Warrants have been duly authorized for issuance by the Company and when executed and delivered by the Company pursuant to this Agreement, will be valid and binding agreements of the Company, enforceable against the Company in accordance with their terms, except as the enforcement thereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting the rights and remedies of creditors or by general equitable principles. The Company has reserved from its duly authorized capital stock the maximum number of shares of Common Stock issuable pursuant to this Agreement and the Pre-Funded Warrants. The Company has prepared and filed the Registration Statement in conformity with the requirements of the Securities Act, which Registration Statement became effective on September 4, 2025, including the Prospectus, and such amendments and supplements thereto as may have been required to the date of this Agreement. The Registration Statement is effective under the Securities Act and no stop order preventing or suspending the effectiveness of the Registration Statement or suspending or preventing the use of the Prospectus or the Prospectus Supplement has been issued by the Commission and no proceedings for that purpose have been instituted or, to the knowledge of the Company, are threatened by the Commission. The Company, if required by the rules and regulations of the Commission, shall file the Prospectus or Prospectus Supplement with the Commission pursuant to Rule 424(b). At the time the Registration Statement and any amendments thereto became effective as determined under the Securities Act, at the date of this Agreement and at the Closing Date, the Registration Statement and any amendments thereto conformed and will conform in all material respects to the requirements of the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading; and the Prospectus, Prospectus Supplement and any amendments or supplements thereto, at the time the Prospectus, the Prospectus Supplement or any amendment or supplement thereto was issued and at the Closing Date, conformed and will conform in all material respects to the requirements of the Securities Act and did not and will not contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Company was at the time of the filing of the Registration Statement eligible to use Form S-3. The Company is eligible to use Form S-3 under the Securities Act and it meets the transaction requirements with respect to the aggregate market value of the common equity held by non-affiliates prior to this offering as set forth in General Instruction I.B.1 of Form S-3.
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- (g) Capitalization. The Company has an authorized capitalization as set forth under the heading “Description of Common Stock” in the Prospectus. Except as set forth in the Prospectus, the Company has not issued any shares since its most recently filed periodic report under the Exchange Act. No Person has any right of first refusal, preemptive right, right of participation, or any similar right to participate in the transactions contemplated by the Transaction Documents. As a result of the purchase and sale of the Securities, there are no outstanding options, warrants, scrip rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exercisable or exchangeable for, or giving any Person any right to subscribe for or acquire, any shares of Common Stock, or contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to issue additional shares of Common Stock or securities convertible, exercisable or exchangeable into shares of Common Stock (“Common Stock Equivalents”). The issuance and sale of the Securities will not obligate the Company or any Subsidiary to issue shares of Common Stock or other securities to any Person (other than the Purchasers) and will not result in a right of any holder of Company securities to adjust the exercise, conversion, exchange or reset price under any of such securities. There are no outstanding securities or instruments of the Company or any Subsidiary with any provision that adjusts the exercise, conversion, exchange or reset price under any of such securities. There are no outstanding securities or instruments of the Company or any Subsidiary that contain any redemption or similar provisions, and there are no contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to redeem a security of the Company or such Subsidiary. The Company does not have any share appreciation rights or “phantom share” plans or agreements or any similar plan or agreement. All of the outstanding shares of the Company are duly authorized, validly issued, fully paid and non-assessable, have been issued in compliance with all federal and state securities laws where applicable, and none of such outstanding shares was issued in violation of any preemptive rights or similar rights to subscribe for or purchase securities. Except for the Required Approvals, no further approval or authorization of any shareholder, the Board of Directors or others is required for the issuance and sale of the Securities. There are no shareholders agreements, voting agreements or other similar agreements with respect to the Company’s share capital to which the Company is a party or, to the knowledge of the Company, between or among any of the Company’s shareholders.
- (h) SEC Reports; Financial Statements. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company under the Securities Act and the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the one year preceding the date hereof (or such shorter period as the Company was required by law or regulation to file such materials) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, together with the Prospectus, being collectively referred to herein as the “SEC Reports”) on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. In addition, any further documents so filed and incorporated by reference to the Prospectus and Prospectus Supplement, when such documents are filed with the Commission, will conform in all material respects to the requirements of the Exchange Act and the applicable rules and regulations, as applicable, and will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made not misleading. The financial statements of the Company included in the SEC Reports comply in all material respects with applicable accounting requirements and the rules and regulations of the Commission with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with GAAP, except as may be otherwise specified in such financial statements or the notes thereto and except that unaudited financial statements may not contain all footnotes required by GAAP, and fairly present in all material respects the financial position of the Company and its consolidated Subsidiaries as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial, year-end audit adjustments.
- (i) Material Changes; Undisclosed Events, Liabilities or Developments. Since the date of the latest audited financial statements included within the SEC Reports, (i) there has been no event, occurrence or development that has had or that could reasonably be expected to result in a Material Adverse Effect, (ii) the Company has not incurred any liabilities (contingent or otherwise) other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and strategic acquisitions and (B) liabilities not required to be reflected in the Company’s financial statements pursuant to GAAP or disclosed in filings made with the Commission, (iii) the Company has not altered its method of accounting, (iv) the Company has not declared or made any dividend or distribution of cash or other property to its shareholders or purchased, redeemed or made any agreements to purchase or redeem any of its shares other than the repurchase of Common Stock pursuant to a stock buyback program and (v) the Company has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing Company share option plans. Except for the issuance of the Securities contemplated by this Agreement, no event, liability, fact, circumstance, occurrence or development has occurred or exists or is reasonably expected to occur or exist with respect to the Company or its Subsidiaries or their respective businesses, prospects, properties, operations, assets or financial condition that would be required to be disclosed by the Company under applicable securities laws at the time this representation is made or deemed made that has not been publicly disclosed at least one (1) Trading Day prior to the date that this representation is made.
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- (j) Litigation. There is no action, suit, inquiry, notice of violation, proceeding or investigation pending or, to the knowledge of the Company, threatened against or affecting the Company, any Subsidiary or any of their respective properties before or by any court, arbitrator, governmental or administrative agency or regulatory authority (federal, state, county, local or foreign) (collectively, an “Action”) which (i) adversely affects or challenges the legality, validity or enforceability of any of the Transaction Documents, the Shares or the Warrant Shares, (ii) could, if there were an unfavorable decision, have or reasonably be expected to result in a Material Adverse Effect. Neither the Company nor any Subsidiary, nor any director or officer thereof, is or has been the subject of any Action involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty, which could result in a Material Adverse Effect. There has not been, and to the knowledge of the Company, there is not pending or contemplated, any investigation by the Commission involving the Company or any current or former director or officer of the Company. The Commission has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company or any Subsidiary under the Exchange Act or the Securities Act.
- (k) Labor Relations. No labor dispute exists or, to the knowledge of the Company, is imminent with respect to any of the employees of the Company, which could reasonably be expected to result in a Material Adverse Effect. None of the Company’s or its Subsidiaries’ employees is a member of a union that relates to such employee’s relationship with the Company or such Subsidiary, and neither the Company nor any of its Subsidiaries is a party to a collective bargaining agreement, and the Company and its Subsidiaries believe that their relationships with their employees are good. To the knowledge of the Company, no executive officer of the Company or any Subsidiary, is, or is now expected to be, in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other contract or agreement or any restrictive covenant in favor of any third party, and the continued employment of each such executive officer does not subject the Company or any of its Subsidiaries to any liability with respect to any of the foregoing matters. The Company and its Subsidiaries are in compliance with all applicable U.S. federal, state, local and foreign laws and regulations relating to employment and employment practices, terms and conditions of employment and wages and hours, except where the failure to be in compliance could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.
- (l) Compliance. Neither the Company nor any Subsidiary: (i) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any Subsidiary under), nor has the Company or any Subsidiary received notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (ii) is in violation of any judgment, decree or order of any court, arbitrator or other governmental authority or (iii) is or has been in violation of any statute, rule, ordinance or regulation of any governmental authority, including without limitation all foreign, federal, state and local laws relating to taxes, environmental protection, occupational health and safety, product quality and safety and employment and labor matters, except in each case of (i), (ii) and (iii) as could not have or reasonably be expected to result in a Material Adverse Effect.
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- (m) Environmental Laws. The Company and its Subsidiaries (i) are in compliance with all federal, state, local and foreign laws relating to pollution or protection of human health or the environment (including ambient air, surface water, groundwater, land surface or subsurface strata), including laws relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, or toxic or hazardous substances or wastes (collectively, “Hazardous Materials”) into the environment, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials, as well as all authorizations, codes, decrees, demands, or demand letters, injunctions, judgments, licenses, notices or notice letters, orders, permits, plans or regulations, issued, entered, promulgated or approved thereunder (“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 where in each clause (i), (ii) and (iii), the failure to so comply could be reasonably expected to have, individually or in the aggregate, a Material Adverse Effect.
- (n) Regulatory Permits. The Company and the Subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state, local or foreign regulatory authorities necessary to conduct their respective businesses as described in the SEC Reports, except where the failure to possess such certificates, authorizations or permits could not reasonably be expected to result in a Material Adverse Effect (“Material Permits”), and neither the Company nor any Subsidiary has received any notice of proceedings relating to the revocation or modification of any Material Permit.
- (o) Title to Assets. The Company and the Subsidiaries have good and marketable title in fee simple to all real property owned by them and good and marketable title in all personal property owned by them that is material to the business of the Company and the Subsidiaries, in each case free and clear of all Liens, except for (i) Liens as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries and (ii) Liens for the payment of federal, state or other taxes, for which appropriate reserves have been made therefor in accordance with GAAP and, the payment of which is neither delinquent nor subject to penalties. Any real property and facilities held under lease by the Company and the Subsidiaries are held by them under valid, subsisting and enforceable leases with which the Company and the Subsidiaries are in compliance in all material respects.
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- (p) Intellectual Property. The Company and the Subsidiaries have, or have rights to use, all patents, patent applications, trademarks, trademark applications, service marks, trade names, trade secrets, inventions, copyrights, licenses and other intellectual property rights and similar rights necessary or required for use in connection with their respective businesses as described in the SEC Reports and which the failure to so have could have a Material Adverse Effect (collectively, the “Intellectual Property Rights”). None of, and neither the Company nor any Subsidiary has received a notice (written or otherwise) that any of, the Intellectual Property Rights has expired, terminated or been abandoned, or is expected to expire or terminate or be abandoned, within two (2) years from the date of this Agreement except as would not reasonably be expected to have a Material Adverse Effect. Neither the Company nor any Subsidiary has received, since the date of the latest audited financial statements included within the SEC Reports, a written notice of a claim or otherwise has any knowledge that the Intellectual Property Rights violate or infringe upon the rights of any Person, except as could not have or reasonably be expected to not have a Material Adverse Effect. To the knowledge of the Company, all such Intellectual Property Rights are enforceable and there is no existing infringement by another Person of any of the Intellectual Property Rights. The Company and its Subsidiaries have taken reasonable security measures to protect the secrecy, confidentiality and value of all of their intellectual properties, except where failure to do so could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. None of the Intellectual Property Rights used by the Company or any of its Subsidiaries in their respective businesses has been obtained or is being used by the Company or such Subsidiary in violation of any contractual obligation binding on the Company or any of its subsidiaries in violation of the rights of any person. The Company and its subsidiaries have taken all reasonable steps in accordance with normal industry practice to protect and maintain the Intellectual Property Rights including, without limitation, the execution of appropriate nondisclosure and invention assignment agreements. The consummation of the transactions contemplated by this Agreement will not result in the loss or impairment of, or payment of, and additional amounts with respect to, nor require the consent of, any other person regarding the Company’s or any of its subsidiaries’ right to own or use any of the Intellectual Property Rights as owned or used in the conduct of such party’s business as currently conducted. To the knowledge of the Company and its Subsidiaries, no employee of any of the Company or its subsidiaries is the subject of any pending claim or proceeding involving a violation of any term of any employment contract, invention disclosure agreement, patent disclosure agreement, noncompetition agreement, non-solicitation agreement, nondisclosure agreement or restrictive covenant to or with a former employer, where the basis of such violation relates to such employee’s employment with the Company or its subsidiaries or actions undertaken by the employee while employed with the Company or its Subsidiaries. The Company has no knowledge of any facts that would preclude it from having valid license rights or clear title to the Intellectual Property Rights. The Company has no knowledge that it lacks or will be unable to obtain any rights or licenses to use all Intellectual Property Rights that are necessary to conduct its business.
- (q) Insurance. The Company and the Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are prudent and customary in the businesses in which the Company and the Subsidiaries are engaged, including, but not limited to, directors and officers insurance coverage at least equal to the aggregate Subscription Amount. Neither the Company nor any Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business without a significant increase in cost.
- (r) Transactions with Affiliates and Employees. None of the officers or directors of the Company or any Subsidiary and, to the knowledge of the Company, none of the employees of the Company or any Subsidiary is presently a party to any transaction with the Company or any Subsidiary (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, providing for the borrowing of money from or lending of money to or otherwise requiring payments to or from any officer, director or such employee or, to the knowledge of the Company, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee, shareholder, member or partner, in each case in excess of \$120,000 other than for (i) payment of salary or consulting fees for services rendered, (ii) reimbursement for expenses incurred on behalf of the Company or a Subsidiary and (iii) other employee benefits, including share option agreements under any share option plan of the Company.
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- (s) Sarbanes-Oxley; Internal Accounting Controls. The Company and the Subsidiaries are in material compliance with any and all applicable requirements of the Sarbanes-Oxley Act of 2002 that are effective as of the date hereof, and any and all applicable rules and regulations promulgated by the Commission thereunder that are effective as of the date hereof and as of the Closing Date. The Company and the Subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company and the Subsidiaries have established disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(c) and 15d-15(c)) for the Company and the Subsidiaries and designed such disclosure controls and procedures to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms. The Company's certifying officers have evaluated the effectiveness of the disclosure controls and procedures of the Company and the Subsidiaries as of the end of the period covered by the most recently filed Form 10-K under the Exchange Act (such date, the "Evaluation Date"). The Company presented in its most recently filed Form 10-K under the Exchange Act the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date. Since the Evaluation Date, there have been no changes in the internal control over financial reporting (as such term is defined in the Exchange Act) that have materially affected, or is reasonably likely to materially affect, the internal control over financial reporting of the Company and its Subsidiaries.
- (t) Certain Fees. Except as set forth in the Prospectus Supplement, no brokerage or finder's fees or commissions are or will be payable by the Company or any Subsidiary to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by the Transaction Documents (for the avoidance of doubt, the foregoing shall not include any fees and/or commissions owed to the Transfer Agent). Other than for Persons engaged by any Purchaser, if any, the Purchasers shall have no obligation with respect to any fees or with respect to any claims made by or on behalf of other Persons for fees of a type contemplated in this Section that may be due in connection with the transactions contemplated by the Transaction Documents.
- (u) Investment Company. The Company is not, and is not an Affiliate of, and immediately after receipt of payment for the Securities, will not be or be an Affiliate of, an "investment company" within the meaning of the Investment Company Act of 1940, as amended. The Company shall conduct its business in a manner so that it will not become an "investment company" subject to registration under the Investment Company Act of 1940, as amended.
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- (v) Registration Rights. No Person has any right to cause the Company to effect the registration under the Securities Act of any securities of the Company or any Subsidiary, except as has been duly waived or satisfied.
 - (w) Listing and Maintenance Requirements. The shares of Common Stock are registered pursuant to Section 12(b) or 12(g) of the Exchange Act, and the Company has taken no action designed to, or which to its knowledge is likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act nor has the Company received any notification that the Commission is contemplating terminating such registration. Except as previously disclosed in the SEC Reports, the Company has not, in the 12 months preceding the date hereof, received notice from any Trading Market on which the Common Stock is or has been listed or quoted to the effect that the Company is not in compliance with the listing or maintenance requirements of such Trading Market. The Company is, and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with all such listing and maintenance requirements. The Common Stock is currently eligible for electronic transfer through The Depository Trust Company or another established clearing corporation and the Company is current in payment of the fees to The Depository Trust Company (or such other established clearing corporation) in connection with such electronic transfer.
 - (x) Application of Takeover Protections. The Company and the Board of Directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Company's articles of incorporation or the laws of its state of incorporation that is or could become applicable to the Purchasers as a result of the Purchasers and the Company fulfilling their obligations or exercising their rights under the Transaction Documents, including without limitation as a result of the Company's issuance of the Securities and the Purchasers' ownership of the Securities.
 - (y) Disclosure. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, the Company confirms that neither it nor any other Person acting on its behalf has provided any of the Purchasers or their agents or counsel with any information that it believes constitutes or might constitute material, non-public information which is not otherwise disclosed in the Prospectus or Prospectus Supplement. The Company understands and confirms that the Purchasers will rely on the foregoing representation in effecting transactions in securities of the Company. All of the disclosure furnished by or on behalf of the Company to the Purchasers regarding the Company and its Subsidiaries, their respective businesses and the transactions contemplated hereby, is true and correct in all material respects and does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading. The press releases disseminated by the Company during the twelve (12) months preceding the date of this Agreement taken as a whole do not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made and when made, not misleading. The Company acknowledges and believes, to its best knowledge, that no Purchaser makes or has made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Section 3.2 hereof.
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- (z) No Integrated Offering. Assuming the accuracy of the Purchasers' representations and warranties set forth in Section 3.2, neither the Company, nor any of its Affiliates, nor any Person acting on its or their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause this offering of the Securities to be integrated with prior offerings by the Company for purposes of any applicable shareholder approval provisions of any Trading Market on which any of the securities of the Company are listed or designated.
- (aa) Solvency. Based on the consolidated financial condition of the Company as of the Closing Date, after giving effect to the receipt by the Company of the proceeds from the sale of the Securities hereunder, (i) the fair saleable value of the Company's assets exceeds the amount that will be required to be paid on or in respect of the Company's existing debts and other liabilities (including known contingent liabilities) as they mature, (ii) the Company's assets do not constitute unreasonably small capital to carry on its business as now conducted and as proposed to be conducted including its capital needs taking into account the particular capital requirements of the business conducted by the Company, consolidated and projected capital requirements and capital availability thereof, and (iii) the current cash flow of the Company, together with the proceeds the Company would receive, were it to liquidate all of its assets, after taking into account all anticipated uses of the cash, would be sufficient to pay all amounts on or in respect of its liabilities when such amounts are required to be paid. The Company does not intend to incur debts beyond its ability to pay such debts as they mature (taking into account the timing and amounts of cash to be payable on or in respect of its debt). The Company has no knowledge of any facts or circumstances, which lead it to believe that it will file for reorganization or liquidation under the bankruptcy or reorganization laws of any jurisdiction within one year from the Closing Date. For the purposes of this Agreement, "Indebtedness" means (x) any liabilities for borrowed money or amounts owed by the Company in excess of \$50,000 (other than trade accounts payable incurred in the ordinary course of business), (y) all guaranties, endorsements and other contingent obligations in respect of indebtedness of others to third parties, whether or not the same are or should be reflected in the Company's consolidated balance sheet (or the notes thereto), except guaranties by endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business; and (z) the present value of any lease payments in excess of \$50,000 due under leases required to be capitalized in accordance with GAAP. Neither the Company nor any Subsidiary is in default with respect to any Indebtedness.
- (bb) Tax Compliance. Except for matters that would not, individually or in the aggregate, have or reasonably be expected to result in a Material Adverse Effect, the Company and its Subsidiaries each (i) has made or filed all federal, state and local income and all foreign income and franchise tax returns, reports and declarations required by any jurisdiction to which it is subject, (ii) has paid all taxes and other governmental assessments and charges, fines or penalties that are material in amount, shown or determined to be due on such returns, reports and declarations and (iii) has set aside on its financial statements provision reasonably adequate for the payment of all material tax liability of which has not been finally determined and all material taxes for periods subsequent to the periods to which such returns, reports or declarations apply. There are no unpaid taxes in any material amount claimed to be due by the taxing authority of any jurisdiction, and the officers of the Company or of any Subsidiary know of no basis for any such claim.
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- (cc) Foreign Corrupt Practices. Neither the Company nor any Subsidiary, nor to the knowledge of the Company or any Subsidiary, any agent or other person acting on behalf of the Company or any Subsidiary, has (i) directly or indirectly, used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses related to foreign or domestic political activity, (ii) made any unlawful payment to foreign or domestic government officials or employees or to any foreign or domestic political parties or campaigns from corporate funds, (iii) failed to disclose fully any contribution made by the Company or any Subsidiary (or made by any person acting on its behalf of which the Company is aware) which is in violation of law, or (iv) violated in any material respect any provision of FCPA.
- (dd) Accountants. The Company's independent registered public accounting firm is as set forth in the Prospectus Supplement. To the knowledge and belief of the Company, such accounting firm (i) is a registered public accounting firm as required by the Exchange Act and (ii) shall express its opinion with respect to the financial statements to be included in the Company's Annual Report for the fiscal year ended December 31, 2025.
- (ee) Acknowledgment Regarding Purchasers' Purchase of Securities. The Company acknowledges and agrees that each of the Purchasers is acting solely in the capacity of an arm's length purchaser with respect to the Transaction Documents and the transactions contemplated thereby. The Company further acknowledges that no Purchaser is acting as a financial advisor or fiduciary of the Company (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated thereby and any advice given by any Purchaser or any of their respective representatives or agents in connection with the Transaction Documents and the transactions contemplated thereby is merely incidental to the Purchasers' purchase of the Securities. The Company further represents to each Purchaser that the Company's decision to enter into this Agreement and the other Transaction Documents has been based solely on the independent evaluation of the transactions contemplated hereby by the Company and its representatives.
- (ff) Acknowledgment Regarding Purchaser's Trading Activity. Anything in this Agreement or elsewhere herein to the contrary notwithstanding (except for Sections 3.2(f) and 4.12 hereof), it is understood and acknowledged by the Company that: (i) none of the Purchasers has been asked by the Company to agree, nor has any Purchaser agreed, to desist from purchasing or selling, long and/or short, securities of the Company, or "derivative" securities based on securities issued by the Company or to hold the Shares for any specified term; (ii) past or future open market or other transactions by any Purchaser, specifically including, without limitation, Short Sales or "derivative" transactions, before or after the closing of this or future private placement transactions, may negatively impact the market price of the Company's publicly-traded securities; (iii) any Purchaser, and counter-parties in "derivative" transactions to which any such Purchaser is a party, directly or indirectly, presently may have a "short" position in the shares of Common Stock, and (iv) each Purchaser shall not be deemed to have any affiliation with or control over any arm's length counter-party in any "derivative" transaction. The Company further understands and acknowledges that (y) one or more Purchasers may engage in hedging activities at various times during the period that the shares of Common Stock are outstanding, and (z) such hedging activities (if any) could reduce the value of the existing shareholders' equity interests in the Company at and after the time that the hedging activities are being conducted. The Company acknowledges that such aforementioned hedging activities do not constitute a breach of any of the Transaction Documents.
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- (gg) Regulation M Compliance. The Company has not, and to its knowledge no one acting on its behalf has, (i) taken, directly or indirectly, any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the shares of Common Stock, (ii) except pursuant to the Company's stock buyback program, sold, bid for, purchased, or, paid any compensation for soliciting purchases of, any of the shares of Common Stock, or (iii) except pursuant to the Company's stock buyback program, paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company, other than, in the case of clauses (ii) and (iii), compensation paid to the Company's placement agent in connection with the placement of the shares of Common Stock.
- (hh) Non-Contravention of Existing Instruments; No Further Authorizations or Approvals Required. The Company's execution, delivery and performance of this Agreement and consummation of the transactions contemplated hereby will not (A) result in a material violation of any existing applicable law, rule, regulation, judgment, order or decree of any governmental entity as of the date hereof (including, without limitation, those promulgated by the Food and Drug Administration of the U.S. Department of Health and Human Services (the "FDA") or by any foreign, federal, state or local regulatory authority performing functions similar to those performed by the FDA), (B) conflict with, result in any violation or breach of, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, or give to others any right of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) (a "Default Acceleration Event") of, any agreement, lease, credit facility, debt, note, bond, mortgage, indenture or other instrument ("Contract") or obligation or other understanding to which the Company is a party or by which any property or asset of the Company is bound or affected, except to the extent that such conflict, default, or Default Acceleration Event is not reasonably likely to result in a Material Adverse Effect, or (C) result in a breach or violation of any of the terms and provisions of, or constitute a default under, the Company's articles of incorporation (as the same may be amended or restated from time to time) or bylaws (as the same may be amended or restated from time to time). The Company is not in violation, breach or default under its articles of incorporation (as the same may be amended or restated from time to time) or bylaws (as the same may be amended or restated from time to time). Neither the Company nor, to its knowledge, any other party is in violation, breach or default of any Contract that has resulted in or could reasonably be expected to result in a Material Adverse Effect. Each approval, consent, order, authorization, designation, declaration or filing by or with any regulatory, administrative or other governmental body necessary in connection with the execution and delivery by the Company of this Agreement and the performance of the Company of the transactions herein contemplated has been obtained or made and is in full force and effect, except filings with the Commission required under the Securities Act or the Exchange Act, or filings with the Exchange pursuant to the rules and regulations of the Exchange, in each case that are contemplated by this Agreement to be made after the date of this Agreement.
- (ii) Stock Option Plans. Each stock option granted by the Company under the Company's stock option plan was granted (i) in accordance with the terms of the Company's stock option plan and (ii) with an exercise price at least equal to the fair market value of the Common Stock on the date such stock option would be considered granted under GAAP and applicable law. No stock option granted under the Company's stock option plan has been backdated. The Company has not knowingly granted, and there is no and has been no Company policy or practice to knowingly grant, stock options prior to, or otherwise knowingly coordinate the grant of stock options with, the release or other public announcement of material information regarding the Company or its Subsidiaries or their financial results or prospects.
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- (jj) Cybersecurity. (i)(x) There has been no security breach or other compromise of or relating to any of the Company's or any Subsidiary's information technology and computer systems, networks, hardware, software, data (including the data of its respective customers, employees, suppliers, vendors and any third party data maintained by or on behalf of it), equipment or technology (collectively, "IT Systems and Data") and (y) the Company and the Subsidiaries have not been notified of, and has no knowledge of any event or condition that would reasonably be expected to result in, any security breach or other compromise to its IT Systems and Data; (ii) the Company and the Subsidiaries are presently in compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Data and to the protection of such IT Systems and Data from unauthorized use, access, misappropriation or modification, except as would not, individually or in the aggregate, have a Material Adverse Effect; (iii) the Company and the Subsidiaries have implemented and maintained commercially reasonable safeguards to maintain and protect its material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and Data; and (iv) the Company and the Subsidiaries have implemented backup and disaster recovery technology consistent with commercially reasonable industry standards and practices.
- (kk) Office of Foreign Assets Control. Neither the Company nor any Subsidiary nor, to the Company's knowledge, any director, officer, agent, employee or affiliate of the Company or any Subsidiary is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("OFAC"). 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: (i) to fund or facilitate any activities or business of or with any Person that, at the time of such funding or facilitation, is the subject of Sanctions, or in any country or territory that, at the time of such funding or facilitation, is the subject of a U.S. government embargo; or (ii) 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). the past ten (10) years, the Company and its subsidiaries have not knowingly engaged in, are not now knowingly engaged in, and will not engage in, any direct or indirect dealings or transactions with any Person that at the time of the dealing or transaction is or was the subject of Sanctions or any country or territory that, at the time of the dealing or transaction is or was the subject of a U.S. government embargo. Neither the Company nor any of its subsidiaries is a "covered foreign person", as that term is defined in 31 C.F.R. § 850.209. Neither the Company nor any of its subsidiaries currently engages, or has plans to engage, directly or indirectly, in a "covered activity", as that term is defined in 31 C.F.R. § 850.208 ("Covered Activity"). The Company does not have any joint ventures that engages in or plans to engage in any Covered Activity. The Company also does not, directly or indirectly, hold a board seat on, have a voting or equity interest in, or have any contractual power to direct or cause the direction of the management or policies of any person or persons that engages or plans to engage in any Covered Activity.
- (ll) U.S. Real Property Holding Corporation. The Company is not and has never been a U.S. real property holding corporation within the meaning of Section 897 of the Internal Revenue Code of 1986, as amended, and the Company shall so certify upon any Purchaser's request.
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- (mm) Bank Holding Company Act. Neither the Company nor any of its Subsidiaries or Affiliates is subject to the Bank Holding Company Act of 1956, as amended (the “BHCA”) and to regulation by the Board of Governors of the Federal Reserve System (the “Federal Reserve”). Neither the Company nor any of its Subsidiaries or Affiliates owns or controls, directly or indirectly, five percent (5%) or more of the outstanding shares of any class of voting securities or twenty-five percent (25%) or more of the total equity of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve. Neither the Company nor any of its Subsidiaries or Affiliates exercises a controlling influence over the management or policies of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve.
- (nn) Money Laundering. The operations of the Company and its Subsidiaries are and have been conducted at all times in compliance with applicable financial record-keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, applicable money laundering statutes and applicable rules and regulations thereunder (collectively, the “Money Laundering Laws”), and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any Subsidiary with respect to the Money Laundering Laws is pending or, to the knowledge of the Company or any Subsidiary, threatened.
- (oo) [Intentionally Omitted]
- (pp) Promotional Stock Activities. Neither the Company nor any Subsidiary of the Company and none of their respective officers, directors, managers, affiliates or agents have engaged in any stock promotional activity that could give rise to a complaint, inquiry, or trading suspension by the SEC alleging (i) a violation of the anti-fraud provisions of the federal securities laws, (ii) violations of the anti-touting provisions, (iii) improper “gun-jumping”; or (iv) promotion without proper disclosure of compensation.
- (qq) Regulatory Matters; Compliance. All preclinical and other nonclinical studies and clinical trials conducted by or on behalf of the Company that are material to the Company have been adequately described in the Registration Statement, in all material respects. The clinical trials and nonclinical studies conducted by or on behalf of the Company that are described in the Registration Statement or the results of such trials and studies which are referred to in the Registration Statement were and, if still ongoing, are being conducted in material compliance with all laws and regulations applicable thereto in the jurisdictions in which they are being conducted. The descriptions in the Registration Statement of the results of such trials and studies are accurate and complete in all material respects and fairly present the data derived from such trials and studies, and the Company has no knowledge of any clinical trials the aggregate results of which are inconsistent with or otherwise call into question the results of any clinical trial conducted by or on behalf of the Company that are described in the Registration Statement or the results of which are referred to in the Registration Statement. Except as disclosed in the Registration Statement, the Company has not received any written notices or other communications from the FDA, the European Medicines Agency (“EMA”) or any other governmental agency or authority imposing, requiring, requesting or suggesting a clinical hold, termination, suspension or material modification of any clinical trial that is described in the Registration Statement or the results of which are referred to in the Registration Statement. Except as disclosed in the Registration Statement, the Company has not received any written notices or other communications from the FDA, the EMA or any other governmental agency, and otherwise has no knowledge of, or reason to believe that, (i) any investigational new drug application for a potential product of the Company is or has been rejected or determined to be non-approvable or conditionally approvable; and (ii) any license, approval, permit or authorization to conduct any clinical trial of any potential product of the Company has been, will be or may be suspended, revoked, modified or limited.
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- (rr) The Company and its Subsidiaries (i) are in material compliance with all statutes, rules and regulations applicable to the 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 or its subsidiaries (“Applicable Laws”) except where such noncompliance could not reasonably be expected to have a Material Adverse Effect; (ii) have not received any Form 483 from the FDA, notice of adverse finding, warning letter, or other written correspondence or notice from the FDA, the European Medicines Agency (the “EMA”), the U.K. Medicines and Healthcare Products Regulatory Agency (the “MHRA”), the German Federal Institute for Drugs and Medical Devices (the “BfArM”), or any other federal, state, local or foreign governmental or regulatory authority alleging or asserting material noncompliance with any Applicable Laws or with any licenses, registrations, certificates, approvals, clearances, authorizations, permits and supplements or amendments thereto required by any such Applicable Laws and held by the Company or any of its subsidiaries (“Authorizations”), that could, individually or in the aggregate, result in a Material Adverse Effect; (iii) possess all material Authorizations and such Authorizations are valid and in full force and effect and neither the Company nor any of its subsidiaries is in material violation of any term of any such Authorizations except where such nonpossession, failure or noncompliance could not reasonably be expected to have a Material Adverse Effect; (iv) have not received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from the FDA, the EMA, the MHRA, the BfArM, or any other federal, state, local or foreign governmental or regulatory authority or any nongovernmental third party alleging that any Company product, operation or activity is in material violation of any Applicable Laws or Authorizations which noncompliance could reasonably be expected to have a Material Adverse Effect and have no knowledge that the FDA, the EMA, the MHRA, the BfArM, or any other federal, state, local or foreign governmental or regulatory authority or any nongovernmental third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding against the Company or any of its subsidiaries; (v) have not received written notice that the FDA, EMA, the MHRA, the BfArM, or any other federal, state, local or foreign governmental or regulatory authority has taken, is taking or intends to take action to limit, suspend, modify or revoke any material Authorizations that could reasonably be expected to have a Material Adverse Effect and have no knowledge that the FDA, EMA, the MHRA, the BfArM, or any other federal, state, local or foreign governmental or regulatory authority is considering such action; (vi) have filed, obtained, maintained or submitted all reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Applicable Laws (including all applicable Health Care Laws (as defined below)) or Authorizations, except whether the failure to file, obtain, maintain or submit such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments could not result in a Material Adverse Effect, and all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were materially complete and correct on the date filed (or were corrected or supplemented by a subsequent submission) except such incompleteness and incorrections as could not reasonably be expected to result in a Material Adverse Effect.
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- (ss) The Company's and its Subsidiaries' business practices have been structured in a manner reasonably designed to comply with the federal, state, and foreign Health Care Laws applicable to the Company's and its subsidiaries' respective businesses, and the Company and its subsidiaries are in compliance with such applicable Health Care Laws, except where the failure to do so could not reasonably be expected to have a Material Adverse Effect. The Company and its Subsidiaries have not engaged in activities which to their knowledge are cause for false claims liability, civil penalties, or mandatory or permissive exclusion from Medicare, Medicaid, or any other state health care program or federal health care program. For purposes of this Agreement, "Health Care Laws" means the: (i) the Federal Food, Drug, and Cosmetic Act (21 U.S.C. § 301 et seq.) and the regulations promulgated thereunder; (ii) all applicable federal, state, local and all applicable foreign health care related fraud and abuse laws, including, without limitation, the U.S. Anti-Kickback Statute (42 U.S.C. Section 1320a-7b(b)), the U.S. civil False Claims Act (31 U.S.C. Section 3729 et seq.), the federal criminal false claims law (42 U.S.C. § 1320a-7b(a)), the federal civil monetary penalties law (42 U.S.C. § 1320a-7a), 18 U.S.C. Sections 286 and 287, the health care fraud criminal provisions under HIPAA (42 U.S.C. Section 1320d et seq.), the exclusion laws (42 U.S.C. § 1320a-7), the statutes and regulations of applicable government healthcare programs, including the European Union General Data Protection Regulation (EU 2016 679), Medicare, Title XVIII of the Social Security Act, and Medicaid, Title XIX of the Social Security Act, and the regulations promulgated pursuant to such statutes; and (iii) the Standards for Privacy of Individually Identifiable Health Information (the "Privacy Rule"), 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 other law or regulation the purpose of which is to protect the privacy of individuals or prescribers. Neither the Company nor any of its subsidiaries has received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other material action from any court or arbitrator or governmental or regulatory authority or any nongovernmental third party alleging that any product, operation or activity is in violation of any Health Care Laws nor, to the Company's knowledge, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened. Neither the Company nor any of its subsidiaries is a party to any corporate integrity agreements, monitoring agreements, consent decrees, plans of correction, settlement orders, or similar agreements with or imposed by any governmental or regulatory authority. Additionally, neither the Company, any of its subsidiaries nor any of their respective 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 a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion.
- (tt) (i) Except as disclosed in the Registration Statement and the Prospectus, there have been no recalls, field notifications, field corrections, market withdrawals or replacements, warnings, "dear doctor" letters, investigator notices, safety alerts or other notice or action relating to an alleged lack of safety, efficacy, or regulatory compliance of the Company's products ("Safety Notices") and (ii) to the Company's knowledge, there are no facts that would be reasonably likely to result in (x) a Safety Notice with respect to the Company's products or services, (y) a change in labeling or packaging of any the Company's respective products or services, or (z) a termination or suspension of manufacturing, marketing or distribution of any the Company's products or services.
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- (uu) The manufacture of the Company's products and product candidates by or, to the Company's knowledge, on behalf of the Company is being conducted in compliance in all material respects with all applicable Health Care Laws, including, to the extent applicable and without limitation, the FDA's current good manufacturing practice regulations codified at 21 C.F.R. Parts 210 and 211, except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect. To the Company's knowledge, (i) the manufacturing facilities and operations of its suppliers are in compliance in all material respects with all applicable statutes, rules, and regulations of the FDA and comparable regulatory agencies outside of the United States to which the Company or its contractors and products are subject; and (ii) none of the contractors involved in producing the Company's products have received any notice of adverse finding, warning letter, or other written correspondence or notice from the FDA, the EMA, the MHRA, the BfArM, or any other federal, state, local or foreign governmental or regulatory authority alleging or asserting material noncompliance with any Applicable Laws, nor is any such contractor subject to or threatened with any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other material action from any court or arbitrator or governmental or regulatory authority or any nongovernmental third party alleging that its operations or activities are in violation of any Applicable Laws.

3.2 Representations and Warranties of the Purchasers. Each Purchaser, for itself and for no other Purchaser, hereby represents and warrants as of the date hereof and as of the Closing Date to the Company as follows (unless as of a specific date therein, in which case they shall be accurate as of such date):

- (a) Organization; Authority. Such Purchaser is either an individual or an entity duly incorporated or formed, validly existing and in good standing under the laws of the jurisdiction of its incorporation or formation with full right, corporate, partnership limited liability company or similar power and authority to enter into and to consummate the transactions contemplated by the Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of the Transaction Documents and performance by such Purchaser of the transactions contemplated by the Transaction Documents have been duly authorized by all necessary corporate, partnership, limited liability company or similar action, as applicable, on the part of such Purchaser. Each Transaction Document to which it is a party has been duly executed by such Purchaser, and when delivered by such Purchaser in accordance with the terms hereof, will constitute the valid and legally binding obligation of such Purchaser, enforceable against it in accordance with its terms, except: (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.
 - (b) Understandings or Arrangements. Such Purchaser is acquiring the Securities as principal for its own account and has no direct or indirect arrangement or understandings with any other persons to distribute or regarding the distribution of such Securities (this representation and warranty not limiting such Purchaser's right to sell the Securities pursuant to the Registration Statement or otherwise in compliance with applicable federal and state securities laws).
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- (c) Purchaser Status. At the time such Purchaser was offered the Securities, it was, and as of the date hereof it is, and on each date on which it exercises any Warrants (unless pursuant to a cashless exercise), it will be either (i) an “accredited investor” as defined in Rule 501(a)(1), (a)(2), (a)(3), (a)(7) or (a)(8) under the Securities Act, or (ii) a “qualified institutional buyer” as defined in Rule 144A(a) under the Securities Act.
- (d) Experience of Such Purchaser. Such Purchaser, either alone or together with its representatives, has such knowledge, sophistication and experience in business and financial matters so as to be capable of evaluating the merits and risks of the prospective investment in the Securities, and has so evaluated the merits and risks of such investment. Such Purchaser is able to bear the economic risk of an investment in the Securities and, at the present time, is able to afford a complete loss of such investment.
- (e) Access to Information. Such Purchaser acknowledges that it has had the opportunity to review the Transaction Documents (including all exhibits and schedules thereto) and the SEC Reports and has been afforded (i) the opportunity to ask such questions as it has deemed necessary of, and to receive answers from, representatives of the Company concerning the terms and conditions of the offering of the Securities and the merits and risks of investing in the Securities; (ii) access to information about the Company and its financial condition, results of operations, business, properties, management and prospects sufficient to enable it to evaluate its investment; and (iii) the opportunity to obtain such additional information that the Company possesses or can acquire without unreasonable effort or expense that is necessary to make an informed investment decision with respect to the investment. Such Purchaser acknowledges and agrees that neither the Placement Agent nor any Affiliate of the Placement Agent has provided such Purchaser with any information or advice with respect to the Securities nor is such information or advice necessary or desired. Neither the Placement Agent nor any Affiliate has made or makes any representation as to the Company or the quality of the Securities and the Placement Agent and any Affiliate may have acquired non-public information with respect to the Company which such Purchaser agrees need not be provided to it. In connection with the issuance of the Securities to such Purchaser, neither the Placement Agent nor any of its Affiliates has acted as a financial advisor or fiduciary to such Purchaser.
- (f) Certain Transactions and Confidentiality. Other than consummating the transactions contemplated hereunder, such Purchaser has not, nor has any Person acting on behalf of or pursuant to any understanding with such Purchaser, directly or indirectly executed any purchases or sales, including Short Sales, of the securities of the Company during the period commencing as of the time that such Purchaser first received a term sheet (written or oral) from the Company or any other Person representing the Company setting forth the material terms, which terms include definitive pricing terms, of the transactions contemplated hereunder and ending immediately prior to the execution hereof. Notwithstanding the foregoing, in the case of a Purchaser that is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of such Purchaser’s assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of such Purchaser’s assets, the representation set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Securities covered by this Agreement. Other than to other Persons party to this Agreement or to such Purchaser’s representatives, including, without limitation, its officers, directors, partners, legal and other advisors, employees, agents and Affiliates, such Purchaser has maintained the confidentiality of all disclosures made to it in connection with this transaction (including the existence and terms of this transaction). Notwithstanding the foregoing, for the avoidance of doubt, nothing contained herein shall constitute a representation or warranty, or preclude any actions, with respect to locating or borrowing shares in order to effect Short Sales or similar transactions in the future.
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- (g) No Voting Agreements. The Purchaser is not a party to any agreement or arrangement, whether written or oral, between the Purchaser and any other Purchaser and any of the Company's shareholders as of the date hereof, regulating the management of the Company, the shareholders' rights in the Company, the transfer of shares in the Company, including any voting agreements, shareholder agreements or any other similar agreement even if its title is different or has any other relations or agreements with any of the Company's shareholders, directors or officers.
- (h) Brokers. Except as set forth on Schedule 3.2(h) or in the Prospectus or Prospectus Supplement, no agent, broker, investment banker, person or firm acting in a similar capacity on behalf of or under the authority of the Purchaser is or will be entitled to any broker's or finder's fee or any other commission or similar fee, directly or indirectly, for which the Company or any of its Affiliates after the Closing could have any liabilities in connection with this Agreement, any of the transactions contemplated by this Agreement, or on account of any action taken by the Purchaser in connection with the transactions contemplated by this Agreement.
- (i) Independent Advice. Each Purchaser understands that nothing in this Agreement or any other materials presented by or on behalf of the Company to the Purchaser in connection with the purchase of the Securities constitutes legal, tax or investment advice.

The Company acknowledges and agrees that the representations contained in this Section 3.2 shall not modify, amend or affect such Purchaser's right to rely on the Company's representations and warranties contained in this Agreement or any representations and warranties contained in any other Transaction Document or any other document or instrument executed and/or delivered in connection with this Agreement or the consummation of the transactions contemplated hereby. Notwithstanding the foregoing, for the avoidance of doubt, nothing contained herein shall constitute a representation or warranty, or preclude any actions, except as set forth in this Agreement, with respect to locating or borrowing shares in order to effect Short Sales or similar transactions in the future.

ARTICLE IV. OTHER AGREEMENTS OF THE PARTIES

4.1 Legends. The shares of Common Stock and, if all or any portion of a Pre-Funded Warrant is exercised at a time when there is an effective registration statement to cover the issuance or resale of the Warrant Shares or if the Pre-Funded Warrant is exercised via cashless exercise, the Warrant Shares shall be issued free of legends. If at any time following the date hereof the Registration Statement is not effective or is not otherwise available for the sale of the shares of Common Stock, the Pre-Funded Warrants or the Warrant Shares, the Company shall immediately notify the holders of the Pre-Funded Warrants in writing that such Registration Statement is not then effective and thereafter shall promptly notify such holders in writing when the Registration Statement is effective again and available for the sale of the Pre-Funded Warrants or the Warrant Shares (it being understood and agreed that the foregoing shall not limit the ability of the Company to issue, or any Purchaser to sell, any of the Pre-Funded Warrants or the Warrant Shares in compliance with applicable federal and state securities laws). The Company shall use commercially reasonable best efforts to keep a registration statement (including the Registration Statement) registering the issuance of the Warrant Shares effective during the term of the Pre-Funded Warrants.

4.2 Furnishing of Information; Public Information. Until the earliest of the time that no Purchaser owns Securities, the Company covenants to maintain the registration of the Common Stock under Section 12(b) or 12(g) of the Exchange Act and to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to the Exchange Act.

4.3 Integration. The Company shall not sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in Section 2 of the Securities Act) that would be integrated with the offer or sale of the Securities for purposes of the rules and regulations of any Trading Market such that it would require shareholder approval prior to the closing of such other transaction unless shareholder approval is obtained before the closing of such subsequent transaction.

4.4 Securities Laws Disclosure; Publicity. The Company shall (a) by the Disclosure Time, issue one or more press releases or Current Reports on Form 8-K (the "Disclosure Time Cleansing Documents") disclosing the material terms of the transactions contemplated hereby and all other material non-public information concerning the Company disclosed to the Purchasers by the Company or any of its Subsidiaries or Affiliates, or any of their respective officers, directors, employees or agents, including, without limitation, the Placement Agent, and (b) file a Current Report on Form 8-K, including the form of the Transaction Documents as exhibits thereto, with the Commission within the time required by the Exchange Act. From and after the issuance of the Disclosure Time Cleansing Documents, the Company represents to the Purchasers that it shall have publicly disclosed all material, non-public information delivered to any of the Purchasers by the Company or any of its Subsidiaries or Affiliates, or any of their respective officers, directors, employees or agents, including, without limitation, the Placement Agent. In addition, effective upon the issuance of Disclosure Time Cleansing Documents, the Company acknowledges and agrees that any and all confidentiality or similar obligations under any agreement, whether written or oral, between the Company, any of its Subsidiaries or any of their respective officers, directors, agents, employees or Affiliates, including, without limitation, the Placement Agent, on the one hand, and any of the Purchasers or any of their Affiliates on the other hand, shall terminate and be of no further force or effect. The Company and each Purchaser shall consult with each other in issuing any other press releases with respect to the transactions contemplated hereby, and neither the Company nor any Purchaser shall issue any such press release nor otherwise make any such public statement without the prior consent of the Company, with respect to any press release of any Purchaser, or without the prior consent of each Purchaser, with respect to any press release of the Company, which consent shall not unreasonably be withheld or delayed, except if such disclosure is required by law, in which case the disclosing party shall promptly provide the other party with prior notice of such public statement or communication. For the avoidance of doubt, no consent of the Company shall be required for any public disclosure by any Purchaser pursuant to Section 13 and/or Section 16 of the Exchange Act and the rules and regulations promulgated thereunder. Notwithstanding the foregoing, the Company shall not publicly disclose the name of any Purchaser, or include the name of any Purchaser in any filing with the Commission or any regulatory agency or Trading Market, without the prior written consent of such Purchaser, except to the extent such disclosure is required by law or Trading Market regulations, in which case the Company shall provide the Purchasers with prior notice of such disclosure permitted and reasonably cooperate with such Purchaser regarding such required disclosure.

4.5 Shareholder Rights Plan. No claim will be made or enforced by the Company or, with the consent of the Company, any other Person, that any Purchaser is an "Acquiring Person" under any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or similar anti-takeover plan or arrangement in effect or hereafter adopted by the Company, or that any Purchaser could be deemed to trigger the provisions of any such plan or arrangement, by virtue of receiving Securities under the Transaction Documents or under any other agreement between the Company and the Purchasers.

4.6 Non-Public Information. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, which shall be disclosed pursuant to Section 4.4, the Company covenants and agrees that neither it, nor any other Person acting on its behalf will provide any Purchaser or its agents or counsel with any information that the Company reasonably believes constitutes material non-public information, unless prior thereto such Purchaser shall have entered into a written agreement with the Company regarding the confidentiality and use of such information. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company. To the extent that the Company, any of its Subsidiaries, or any of their respective officers, directors, agents, employees or Affiliates delivers any material, non-public information to a Purchaser without such Purchaser's consent, the Company hereby covenants and agrees that such Purchaser shall not have any duty of confidentiality to the Company, any of its Subsidiaries, or any of their respective officers, directors, agents, employees or Affiliates, or a duty to the Company, and of its Subsidiaries or any of their respective officers, directors, agents, employees or Affiliates not to trade on the basis of, such material, non-public information, provided that the Purchaser shall remain subject to applicable law. To the extent that any notice provided pursuant to any Transaction Document constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously with the delivery of such notice file such notice with the Commission pursuant to a Current Report on Form 8-K. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company.

4.7 Use of Proceeds. The Company shall use the net proceeds from the sale of the Securities hereunder for working capital purposes and general corporate purposes as well as for the satisfaction of any portion of the Company's debt, and shall not use such proceeds: (a) for the redemption of any shares of Common Stock or Common Stock Equivalents; provided that the Company shall be permitted to repurchase shares of its Common Stock pursuant to a stock buyback program, (b) for the settlement of any outstanding litigation or (c) in violation of FCPA or OFAC regulations or similar applicable regulations.

4.8 Indemnification of Purchasers. Subject to the provisions of this Section 4.8, the Company will indemnify and hold each Purchaser and its directors, officers, shareholders, members, partners, employees and agents (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title), each Person who controls such Purchaser (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, shareholders, agents, members, partners or employees (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title) of such controlling persons (each, a "Purchaser Party") harmless from any and all losses, liabilities, obligations, claims, contingencies, damages, costs and expenses, including all judgments, amounts paid in settlements, court costs and reasonable attorneys' fees and costs of investigation that any such Purchaser Party may suffer or incur as a result of or relating to (a) any breach of any of the representations, warranties, covenants or agreements made by the Company in this Agreement or in the other Transaction Documents or (b) any action instituted against a Purchaser Party in any capacity (including a Purchaser Party's status as an investor), or any of them or their respective Affiliates, by the Company or any shareholder of the Company who is not an Affiliate of such Purchaser Party, arising out of or relating to any of the transactions contemplated by the Transaction Documents. For the avoidance of doubt, the indemnification provided herein is intended to, and shall also cover, direct claims brought by the Company against any Purchaser Parties; provided, however, that such indemnification shall not cover any loss, claim, damage or liability to the extent it is finally judicially determined to be attributable to any Purchaser Party's breach of any of the representations, warranties, covenants or agreements made by such Purchaser Party in any Transaction Document or any conduct by a Purchaser Party which is finally judicially determined to constitute fraud, gross negligence or willful misconduct). If any action shall be brought against any Purchaser Party in respect of which indemnity may be sought pursuant to this Agreement, such Purchaser Party shall promptly notify the Company in writing, and, except with respect to direct claims brought by the Company, the Company shall have the right to assume the defense thereof with counsel of its own choosing reasonably acceptable to the Purchaser Party. Any Purchaser Party shall have the right to employ separate counsel in any such action and participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Purchaser Party except to the extent that (i) the employment thereof has been specifically authorized by the Company in writing, (ii) the Company has failed after a reasonable period of time to assume such defense and to employ counsel or (iii) in such action there is, in the reasonable opinion of counsel to the applicable Purchaser Party (which may be internal counsel), a material conflict on any material issue between the position of the Company and the position of such Purchaser Party, in which case the Company shall be responsible for the reasonable fees and expenses of no more than one such separate counsel. The Company will not be liable to any Purchaser Party under this Agreement for any settlement by a Purchaser Party effected without the Company's prior written consent, which shall not be unreasonably withheld or delayed. In addition, if any Purchaser Party takes action to collect amounts due under any Transaction Documents or to enforce the provisions of any Transaction Documents, then the Company shall pay the costs incurred by such Purchaser Party for such collection, enforcement or action, including, but not limited to, attorneys' fees and disbursements. The indemnification and other payment obligations required by this Section 4.8 shall be made by periodic payments of the amount thereof during the course of the investigation, defense, collection, enforcement or action, as and when bills are received or are incurred; provided, that if any Purchaser Party is finally judicially determined not to be entitled to indemnification or payment under this Section 4.8, such Purchaser Party shall promptly reimburse the Company for any payments that are advanced under this sentence. The indemnity agreements contained herein shall be in addition to any cause of action or similar right of any Purchaser Party against the Company or others and any liabilities the Company may be subject to pursuant to law.

4.9 Listing of Common Stock. The Company hereby agrees to use commercially reasonable best efforts to maintain the listing or quotation of the shares of Common Stock on each Trading Market on which each is currently listed, and concurrently with the Closing, the Company shall apply to list or quote all of the Shares and Warrant Shares on such Trading Markets and promptly secure the listing of all of the Shares and Warrant Shares on such Trading Markets. The Company further agrees, if the Company applies to have the Common Stock traded on any other Trading Market, it will then include in such application all of the Shares and Warrant Shares, and will take such other action as is necessary to cause all of the Shares and Warrant Shares to be listed or quoted on such other Trading Market as promptly as possible. The Company will then take all action reasonably necessary to continue the listing and trading of the Common Stock on a Trading Market and will comply in all material respects with the Company's reporting, filing and other obligations under the bylaws or rules of the Trading Market. The Company agrees to use commercially reasonable efforts to maintain the eligibility of the electronic transfer through the Depository Trust Company or another established clearing corporation, including, without limitation, by timely payment of fees to the Depository Trust Company or such other established clearing corporation in connection with such electronic transfer.

4.10 Subsequent Equity Sales.

- (a) From the date hereof until thirty (30) days after the Closing Date, neither the Company nor any Subsidiary shall (i) issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of Common Stock or Common Stock Equivalents or (ii) file any registration statement or amendment or supplement thereto, other than the Prospectus Supplement or filing a registration statement on Form S-8 in connection with any employee benefit plan.
- (b) From the date hereof until one hundred and eighty (180) days after the Closing Date, the Company shall be prohibited from effecting or entering into an agreement to effect any issuance by the Company or any of its Subsidiaries of shares of Common Stock or Common Stock Equivalents (or a combination of units thereof) involving a Variable Rate Transaction. "Variable Rate Transaction" means a transaction in which the Company (i) issues or sells any debt or equity securities that are convertible into, exchangeable or exercisable for, or include the right to receive additional shares of Common Stock either (A) at a conversion price, exercise price or exchange rate or other price that is based upon and/or varies with the trading prices of or quotations for the shares of Common Stock at any time after the initial issuance of such debt or equity securities, or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such debt or equity security or upon the occurrence of specified or contingent events directly or indirectly related to the business of the Company or the market for the shares of Common Stock, or (ii) enters into, or effects a transaction under, any agreement, including, but not limited to, an equity line of credit or an "at-the-market offering", whereby the Company may issue securities at a future determined price regardless of whether shares pursuant to such agreement have actually been issued and regardless of whether such agreement is subsequently cancelled; provided, however, that after thirty (30) days after the Closing Date, neither (i) the Company's current "at-the-market" offering pursuant to the Sales Agreement, dated June 11, 2025, as amended on November 21, 2025, between the Company and A.G.P./Alliance Global Partners, (ii) shares of Common Stock sold to Lincoln Park Capital Fund, LLC pursuant to the Purchase Agreement, dated as of June 11, 2025, between the Company and Lincoln Park Capital Fund, LLC, nor (iii) the entry into and/or issuance of shares of Common Stock in (a) an "at-the-market" offering or (b) pursuant to a purchase agreement with Lincoln Park Capital Fund, LLC shall be deemed a Variable Rate Transaction. Any Purchaser shall be entitled to obtain injunctive relief against the Company to preclude any such issuance, which remedy shall be in addition to any right to collect damages.
- (c) Notwithstanding the foregoing, this Section 4.10 shall not apply in respect of an Exempt Issuance, except that no Variable Rate Transaction shall be an Exempt Issuance.

4.11 Equal Treatment of Purchasers. No consideration (including any modification of the Transaction Documents) shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of the Transaction Documents unless the same consideration is also offered to all of the parties to the Transaction Documents. For clarification purposes, this provision constitutes a separate right granted to each Purchaser by the Company and negotiated separately by each Purchaser, and is intended for the Company to treat the Purchasers as a class and shall not in any way be construed as the Purchasers acting in concert or as a group with respect to the purchase, disposition or voting of the shares of Common Stock or otherwise.

4.12 Certain Transactions and Confidentiality. Each Purchaser, severally and not jointly with the other Purchasers, covenants that neither it nor any Affiliate acting on its behalf or pursuant to any understanding with it will execute any purchases or sales, including Short Sales of any of the Company's securities during the period commencing with the execution of this Agreement and ending on the earlier of (a) at such time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release as described in Section 4.4 and (b) the Disclosure Time. Each Purchaser, severally and not jointly with the other Purchasers, covenants that until the earlier of (a) such time as the transactions contemplated by this Agreement are publicly disclosed by the Company pursuant to the initial press release as described in Section 4.4 and (b) the Disclosure Time, such Purchaser will maintain the confidentiality of the existence and terms of this transaction. Notwithstanding the foregoing, and notwithstanding anything contained in this Agreement to the contrary, the Company expressly acknowledges and agrees that (i) no Purchaser makes any representation, warranty or covenant hereby that it will not engage in effecting transactions in any securities of the Company after the earlier of (a) the time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release as described in Section 4.4 and (b) the Disclosure Time, (ii) no Purchaser shall be restricted or prohibited from effecting any transactions in any securities of the Company in accordance with applicable securities laws from and after the earlier of (a) the time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release as described in Section 4.4 and (b) the Disclosure Time and (iii) no Purchaser shall have any duty of confidentiality or duty not to trade in the securities of the Company to the Company, any of its Subsidiaries, or any of their respective officers, directors, employees, Affiliates or agents after the earlier of (a) the issuance of the initial press release as described in Section 4.4 and (b) the Disclosure Time. Notwithstanding the foregoing, in the case of a Purchaser that is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of such Purchaser's assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of such Purchaser's assets, the covenant set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Securities covered by this Agreement.

4.13 Exercise Procedures. The form of Notice of Exercise included in the Pre-Funded Warrants set forth the totality of the procedures required of the Purchasers in order to exercise the Pre-Funded Warrants. No additional legal opinion, other information or instructions shall be required of the Purchasers to exercise their Pre-Funded Warrants. Without limiting the preceding sentences, no ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise form be required in order to exercise the Pre-Funded Warrants. The Company shall honor exercises of the Pre-Funded Warrants and shall deliver Warrant Shares in accordance with the terms, conditions and time periods set forth in the Transaction Documents.

4.14 Reservations of Shares. As of the date hereof, the Company has reserved and the Company shall continue to reserve and keep available at all times, free of preemptive rights, a sufficient number of shares of Common Stock for the purpose of enabling the Company to issue shares of Common Stock pursuant to this Agreement and the Warrant Shares pursuant to any exercise of the Pre-Funded Warrants.

4.15 Reliance by and Exculpation of Placement Agent.

- (a) Each Purchaser agrees for the express benefit of the Placement Agent, its affiliates and its representatives that (i) it is not relying upon, and has not relied upon, any statement, representation or warranty made by the Placement Agent, any of its affiliates or any of its or its representatives, in making its investment or decision to invest in the Company, (ii) the Placement Agent is acting solely as placement agent in connection with the transactions contemplated hereby and is not acting as an underwriter, initial purchaser, dealer or in any other such capacity and is not and shall not be construed as a fiduciary for such Purchaser, (iii) the Placement Agent, its affiliates and representatives have not made, and will not make any representations or warranties with respect to the Company or the offer and sale of the Securities or any other matter concerning the Company or the transactions contemplated hereby, and the Purchaser will not rely on any statements made by the Placement Agent, orally or in writing, to the contrary, (iv) the Purchaser will be responsible for conducting its own due diligence investigation with respect to the Company and the offer and sale of the Securities, (v) the Purchaser will be purchasing Securities based on the results of its own due diligence investigation of the Company and the Placement Agent and each of its directors, officers, employees, representatives, and controlling persons have made no independent investigation with respect to the Company, the Securities, or the accuracy, completeness, or adequacy of any information supplied to the Purchaser by the Company, (vi) the Purchaser has negotiated the offer and sale of the Securities directly with the Company, and the Placement Agent will not be responsible for the ultimate success of any such investment and (vii) the decision to invest in the Company will involve a significant degree of risk, including a risk of total loss of such investment. Each Purchaser further represents and warrants to the Placement Agent that it, including any fund or funds that it manages or advises that participates in the offer and sale of the Securities, is permitted under its constitutive documents (including, without limitation, all limited partnership agreements, charters, bylaws, limited liability company agreements, all applicable side letters with investors, and similar documents) to make investments of the type contemplated by this Agreement. This 4.15 shall survive any termination of this Agreement.
-

- (b) The Company agrees and acknowledges that the Placement Agent may rely on its representations, warranties, agreements and covenants contained in this Agreement and each Purchaser agrees that the Placement Agent may rely on such Purchaser's representations and warranties contained in this Agreement as if such representations and warranties, as applicable, were made directly to the Placement Agent.
- (c) Neither the Placement Agent nor any of its Affiliates or representatives (1) shall be liable for any improper payment made in accordance with the information provided by the Company; (2) makes any representation or warranty, or has any responsibilities as to the validity, enforceability, accuracy, value or genuineness of any information, certificates or documentation delivered by or on behalf of the Company pursuant to the Transaction Documents or in connection with any of the transactions contemplated therein; or (3) shall be liable (x) for any action taken, suffered or omitted by any of them in good faith and reasonably believed to be authorized or within the discretion or rights or powers conferred upon it by the Transaction Documents or (y) for anything which any of them may do or refrain from doing in connection with the Transaction Documents, except in each case for such party's own gross negligence or willful misconduct.
- (d) The Company agrees that the Placement Agent, its affiliates and representatives shall be entitled to (1) rely on, and shall be protected in acting upon, any certificate, instrument, notice, letter or any other document or security delivered to any of them by or on behalf of the Company, and (2) be indemnified by the Company for acting as the Placement Agent hereunder pursuant to the indemnification provisions set forth in the applicable letter agreement between the Company and the Placement Agent.

4.16. Lock-Up Agreements. The Company shall not amend, modify, waive or terminate any provision of any of the Lock-Up Agreements without the prior written consent of the Placement Agent, except to extend the term of the lock-up period, and shall enforce the provisions of each Lock-Up Agreement in accordance with its terms. If any party to a Lock-Up Agreement breaches any provision of a Lock-Up Agreement, the Company shall promptly use its best efforts to seek specific performance of the terms of such Lock-Up Agreement.

ARTICLE V. MISCELLANEOUS

5.1 Termination. This Agreement may be terminated by any Purchaser, as to such Purchaser's obligations hereunder only and without any effect whatsoever on the obligations between the Company and the other Purchasers, by written notice to the other parties, if the Closing has not been consummated on or before the fifth (5th) Trading Day following the date hereof; provided, however, that no such termination will affect the right of any party to sue for any breach by any other party (or parties).

5.2 Fees and Expenses. Except as expressly set forth in the Transaction Documents to the contrary, each party shall pay the fees and expenses of its advisers, counsel, accountants and other experts, if any, and all other expenses incurred by such party incident to the negotiation, preparation, execution, delivery and performance of this Agreement. The Company shall pay all Transfer Agent fees (including, without limitation, any fees required for same-day processing of any instruction letter delivered by the Company and any exercise notice delivered by a Purchaser), stamp taxes and other taxes and duties levied in connection with the delivery of any Securities to the Purchasers.

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

5.4 Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of: (a) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or email attachment at the email address as set forth on the signature pages attached hereto at or prior to 5:30 p.m. (New York City time) on a Trading Day, (b) the next Trading Day after the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or email attachment at the email address as set forth on the signature pages attached hereto on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (c) the second (2nd) Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service or (d) upon actual receipt by the party to whom such notice is required to be given. The address for such notices and communications shall be as set forth on the signature pages attached hereto. To the extent that any notice provided pursuant to any Transaction Document constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously with the delivery of such notice file such notice with the Commission pursuant to a Current Report on Form 8-K.

5.5 Amendments; Waivers. No provision of this Agreement may be waived, modified, supplemented or amended except in a written instrument signed, in the case of an amendment, by the Company and the Purchasers who purchased at least 50.1% in interest of the sum of (i) the Shares and (ii) the Warrant Shares initially issuable upon exercise of the Pre-Funded Warrants based on the initial Subscription Amounts hereunder (or, if prior to Closing, the Company and each Purchaser), or, in the case of a waiver, by the party against whom enforcement of any such waived provision is sought; provided, that if any amendment, modification or waiver disproportionately and adversely impacts a Purchaser (or group of Purchasers), the consent of such disproportionately impacted Purchaser (or at least 50.1% in interest of such disproportionately impacted Purchasers) shall also be required. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any party to exercise any right hereunder in any manner impair the exercise of any such right. Any proposed amendment or waiver that disproportionately, materially and adversely affects the rights and obligations of any Purchaser relative to the comparable rights and obligations of the other Purchasers shall require the prior written consent of such adversely affected Purchaser. Any amendment effected in accordance with this Section 5.5 shall be binding upon each Purchaser and holder of Securities and the Company.

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

5.7 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their successors and permitted assigns. The Company may not assign this Agreement or any rights or obligations hereunder without the prior written consent of each Purchaser (other than by merger). Any Purchaser may assign any or all of its rights under this Agreement to any Person to whom such Purchaser assigns or transfers any Securities, provided that such transferee agrees in writing to be bound, with respect to the transferred Securities, by the provisions of the Transaction Documents that apply to the "Purchasers."

5.8 No Third-Party Beneficiaries. The Placement Agent shall be third-party beneficiary of the representations and warranties of the Company in Section 3.1 and the representations and warranties of the Purchasers in Section 3.2. This Agreement is intended for the benefit of the parties hereto and their respective successors and permitted assigns and is not for the benefit of, nor may any provision hereof be enforced by, any other Person, except as otherwise set forth in Section 4.8 and this Section 5.8.

5.9 Governing Law. All questions concerning the construction, validity, enforcement and interpretation of the Transaction Documents shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement and any other Transaction Documents (whether brought against a party hereto or its respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party 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, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action, suit or proceeding to enforce any provisions of the Transaction Documents, then, in addition to the obligations of the Company under Section 4.8, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for its reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

5.10 Survival. The representations and warranties contained herein shall survive the Closing and the delivery of the Securities for the applicable statute of limitations.

5.11 Execution. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to each other party, it being understood that the parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or ".pdf" signature page was an original thereof.

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

5.13 Rescission and Withdrawal Right. Notwithstanding anything to the contrary contained in (and without limiting any similar provisions of) any of the other Transaction Documents, whenever any Purchaser exercises a right, election, demand or option under a Transaction Document and the Company does not timely perform its related obligations within the periods therein provided, then such Purchaser may rescind or withdraw, in its sole discretion from time to time upon written notice to the Company, any relevant notice, demand or election in whole or in part without prejudice to its future actions and rights; provided, however, that, in the case of a rescission of an exercise of a Pre-Funded Warrant, the applicable Purchaser shall be required to return any shares of Common Stock subject to any such rescinded exercise notice concurrently with the return to such Purchaser of the aggregate exercise price paid to the Company for such shares and the restoration of such Purchaser's right to acquire such shares pursuant to such Purchaser's Pre-Funded Warrant (including, issuance of a replacement warrant certificate evidencing such restored right).

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

5.15 Remedies. In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, each of the Purchasers and the Company will be entitled to specific performance under the Transaction Documents. The parties agree that monetary damages may not be adequate compensation for any loss incurred by reason of any breach of obligations contained in the Transaction Documents and hereby agree to waive and not to assert in any action for specific performance of any such obligation the defense that a remedy at law would be adequate.

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

5.17 Independent Nature of Purchasers' Obligations and Rights. The obligations of each Purchaser under any Transaction Document are several and not joint with the obligations of any other Purchaser, and no Purchaser shall be responsible in any way for the performance or non-performance of the obligations of any other Purchaser under any Transaction Document. Nothing contained herein or in any other Transaction Document, and no action taken by any Purchaser pursuant hereto or thereto, shall be deemed to constitute the Purchasers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Purchasers are in any way acting in concert or as a group with respect to such obligations or the transactions contemplated by the Transaction Documents. Each Purchaser shall be entitled to independently protect and enforce its rights including, without limitation, the rights arising out of this Agreement or out of the other Transaction Documents, and it shall not be necessary for any other Purchaser to be joined as an additional party in any proceeding for such purpose. Each Purchaser has been represented by its own separate legal counsel in its review and negotiation of the Transaction Documents. For reasons of administrative convenience only, each Purchaser and its respective counsel have chosen to communicate with the Company through Placement Agent Counsel. Placement Agent Counsel does not represent any of the Purchasers and only represents the Placement Agent. The Company has elected to provide all Purchasers with the same terms and Transaction Documents for the convenience of the Company and not because it was required or requested to do so by any of the Purchasers. It is expressly understood and agreed that each provision contained in this Agreement and in each other Transaction Document is between the Company and a Purchaser, solely, and not between the Company and the Purchasers collectively and not between and among the Purchasers.

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

5.19 Liquidated Damages. The Company's obligations to pay any partial liquidated damages or other amounts owing under the Transaction Documents is a continuing obligation of the Company and shall not terminate until all unpaid partial liquidated damages and other amounts have been paid notwithstanding the fact that the instrument or security pursuant to which such partial liquidated damages or other amounts are due and payable shall have been canceled.

5.20 Construction. The parties agree that each of them and/or their respective counsel have reviewed and had an opportunity to revise the Transaction Documents and, therefore, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of the Transaction Documents or any amendments thereto. In addition, each and every reference to share prices and shares of Common Stock in any Transaction Document shall be subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions relating to shares of Common Stock that occur after the date of this Agreement.

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

(Signature Pages Follow)

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

TONIX PHARMACEUTICALS HOLDING CORP.

Address for Notice:

By: _____

Name:

Email:

Title:

Fax:

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

Email:

Attention:

Fax:

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK
SIGNATURE PAGE FOR PURCHASER FOLLOWS]

[PURCHASER SIGNATURE PAGES TO SECURITIES PURCHASE AGREEMENT]

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

Name of Purchaser: _____

Signature of Authorized Signatory of Purchaser: _____

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

Email Address of Authorized Signatory: _____

Facsimile Number of Authorized Signatory: _____

Address for Notice to Purchaser:

Address for Delivery of Warrant Shares to the Purchaser (if not same address for notice):

DWAC for Common Stock:

Subscription Amount: \$ _____

Shares of Common Stock: _____

Shares of Common Stock underlying the Pre-Funded Warrants: _____

Beneficial Ownership Blocker ☐ 4.99% or ☐ 9.99%

EIN Number: _____

☐ Notwithstanding anything contained in this Agreement to the contrary, by checking this box (i) the obligations of the above-signed to purchase the securities set forth in this Agreement to be purchased from the Company by the above-signed, and the obligations of the Company to sell such securities to the above-signed, shall be unconditional and all conditions to Closing shall be disregarded, (ii) the Closing shall occur on the second (2nd) Trading Day following the date of this Agreement and (iii) any condition to Closing contemplated by this Agreement (but prior to being disregarded by clause (i) above) that required delivery by the Company or the above-signed of any agreement, instrument, certificate or the like or purchase price (as applicable) shall no longer be a condition and shall instead be an unconditional obligation of the Company or the above-signed (as applicable) to deliver such agreement, instrument, certificate or the like or purchase price (as applicable) to such other party on the Closing Date.

[SIGNATURE PAGES CONTINUE]

Exhibit A

Form of Pre-Funded Warrant
(See Attached)

Exhibit B

Form of Lock-Up Agreement
(See Attached)



Tonix Pharmaceuticals Announces Pricing of \$20.0 Million Registered Direct Offering

CHATHAM, N.J., December 29, 2025 (GLOBE NEWSWIRE) -- Tonix Pharmaceuticals Holding Corp. (Nasdaq: TNXP) ("Tonix" or the "Company"), a fully-integrated commercial stage biotechnology company, today announced it has entered into a securities purchase agreement with Point72 for the purchase and sale of 615,025 shares of its common stock at an offering price of \$16.26 per share and, in lieu of shares of common stock, pre-funded warrants to purchase up to an aggregate of 615,025 shares of common stock at a purchase price of \$16.259 per pre-funded warrant, which equals the offering price per share of the common stock less the \$0.001 per share exercise price of each pre-funded warrant. The closing of the offering is expected to take place on or about December 30, 2025, subject to the satisfaction of customary closing conditions.

The gross proceeds of the offering will be approximately \$20.0 million before deducting placement agent fees and other estimated offering expenses payable by the Company. The Company intends to use the net proceeds from the offering to fund the commercialization of its marketed products, the development of its product pipeline, and general working capital and corporate purposes.

TD Cowen is acting as sole placement agent for the offering. A.G.P./Alliance Global Partners is acting as a financial advisor.

This offering is being made pursuant to an effective shelf registration statement on Form S-3 (File No. 333-287965) previously filed with the U.S. Securities and Exchange Commission (the "SEC"). A prospectus supplement describing the terms of the proposed offering will be filed with the SEC and will be available on the SEC's website located at <http://www.sec.gov>. Electronic copies of the prospectus supplement may be obtained, when available, from TD Securities (USA) LLC, c/o Broadridge Financial Solutions, 1155 Long Island Avenue, Edgewood, NY 11717 or by email at TManualrequest@broadridge.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 registration or qualification under the securities laws of any such state or other jurisdiction.

Tonix Pharmaceuticals Holding Corp.*

Tonix is a fully-integrated biotechnology company with marketed products and a pipeline of development candidates. Tonix markets FDA-approved TONMYATM, a first-in-class, non-opioid analgesic medicine for the treatment of fibromyalgia, a chronic pain condition that affects millions of adults. TONMYA is the first new prescription medicine approved by the FDA for fibromyalgia in more than 15 years. TONMYA was investigated as TNX-102 SL. Tonix also markets two treatments for acute migraine in adults: Zembrace® SymTouch® (sumatriptan injection) and Tosymra® (sumatriptan nasal spray). Tonix's development portfolio* is focused on central nervous system (CNS) disorders, immunology, immuno-oncology, rare disease and infectious disease. TNX-102 SL is being developed to treat acute stress reaction and acute stress disorder under an Investigator-Initiated IND at the University of North Carolina in the OASIS study funded by the U.S. Department of Defense (DoD). TNX-102 SL is also in development for major depressive disorder. Tonix's immunology development portfolio consists of biologics to address organ transplant rejection, autoimmunity and cancer, including TNX-1500, which is a Phase 2- ready Fc-modified humanized monoclonal antibody targeting CD40-ligand (CD40L or CD154) being developed for the prevention of allograft rejection and for the treatment of autoimmune diseases. Tonix's rare disease portfolio includes TNX-2900, intranasal oxytocin potentiated with magnesium, in development for Prader-Willi syndrome and expected to start a potential pivotal Phase 2 study in 2026. Tonix's infectious disease portfolio includes TNX-801, a vaccine in development for mpox and smallpox, as well as TNX-4800, a Phase 2- ready long-acting humanized monoclonal antibody for the seasonal prevention of Lyme disease. Finally, TNX-4200 for which Tonix has a contract with the U.S. DoD's Defense Threat Reduction Agency (DTRA) for up to \$34 million over five years, is a small molecule broad-spectrum antiviral agent targeting CD45 for the prevention or treatment of high lethality infections to improve the medical readiness of military personnel in biological threat environments. Tonix owns and operates a state-of-the-art infectious disease research facility in Frederick, Md.

* Tonix's product development candidates are investigational new drugs or biologics; their efficacy and safety have not been established and have not been approved for any indication.

Forward Looking Statements

Certain statements in this press release are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995 including those relating to the completion of the offering, the satisfaction of customary closing conditions, the intended use of proceeds from the offering and other statements that are predictive in nature. These statements may be identified by the use of forward-looking words such as "anticipate," "believe," "forecast," "estimate," "expect," and "intend," among others. These forward-looking statements are based on Tonix's current expectations and actual results could differ materially as a result of a number of factors, including the ability of the Company to satisfy the conditions to the closing of the offering and the timing thereof, as well as those described in the Company's Annual Report on Form 10-K for the year ended December 31, 2024, as filed with the SEC on March 18, 2025, and periodic reports filed with the SEC on or after the date thereof. Tonix does not undertake an obligation to update or revise any forward-looking statement. All of Tonix's forward-looking statements are expressly qualified by all such risk factors and other cautionary statements. The information set forth herein speaks only as of the date thereof.

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INDICATION

TONMYA is indicated for the treatment of fibromyalgia in adults.

CONTRAINDICATIONS

TONMYA is contraindicated:

In patients with hypersensitivity to cyclobenzaprine or any inactive ingredient in TONMYA. Hypersensitivity reactions may manifest as an anaphylactic reaction, urticaria, facial and/or tongue swelling, or pruritus. Discontinue TONMYA if a hypersensitivity reaction is suspected. With concomitant use of monoamine oxidase (MAO) inhibitors or within 14 days after discontinuation of an MAO inhibitor. Hyperpyretic crisis seizures and deaths have occurred in patients who received cyclobenzaprine (or structurally similar tricyclic antidepressants) concomitantly with MAO inhibitors drugs.

During the acute recovery phase of myocardial infarction, and in patients with arrhythmias, heart block or conduction disturbances, or congestive heart failure. In patients with hyperthyroidism.

WARNINGS AND PRECAUTIONS

Embryofetal toxicity: Based on animal data, TONMYA may cause neural tube defects when used two weeks prior to conception and during the first trimester of pregnancy. Advise females of reproductive potential of the potential risk and to use effective contraception during treatment and for two weeks after the final dose. Perform a pregnancy test prior to initiation of treatment with TONMYA to exclude use of TONMYA during the first trimester of pregnancy.

Serotonin syndrome: Concomitant use of TONMYA with selective serotonin reuptake inhibitors (SSRIs), serotonin norepinephrine reuptake inhibitors (SNRIs), tricyclic antidepressants, tramadol, bupropion, meperidine, verapamil, or MAO inhibitors increases the risk of serotonin syndrome, a potentially life-threatening condition. Serotonin syndrome symptoms may include mental status changes, autonomic instability, neuromuscular abnormalities, and/or gastrointestinal symptoms. Treatment with TONMYA and any concomitant serotonergic agent should be discontinued immediately if serotonin syndrome symptoms occur and supportive **symptomatic treatment should be initiated**. If concomitant treatment with TONMYA and other serotonergic drugs is clinically warranted, careful observation is advised, particularly during treatment initiation or dosage increases.

Tricyclic antidepressant-like adverse reactions: Cyclobenzaprine is structurally related to TCAs. TCAs have been reported to produce arrhythmias, sinus tachycardia, prolongation of the conduction time leading to myocardial infarction and stroke. If clinically significant central nervous system (CNS) symptoms develop, consider discontinuation of TONMYA. Caution should be used when TCAs are given to patients with a history of seizure disorder, because TCAs may lower the seizure threshold. Patients with a history of seizures should be monitored during TCA use to identify recurrence of seizures or an increase in the frequency of seizures.

Atropine-like effects: Use with caution in patients with a history of urinary retention, angle-closure glaucoma, increased intraocular pressure, and in patients taking anticholinergic drugs.

CNS depression and risk of operating a motor vehicle or hazardous machinery: TONMYA monotherapy may cause CNS depression. Concomitant use of TONMYA with alcohol, barbiturates, or other CNS depressants may increase the risk of CNS depression. Advise patients not to operate a motor vehicle or dangerous machinery until they are reasonably certain that TONMYA therapy will not adversely affect their ability to engage in such activities. Oral mucosal adverse reactions: In clinical studies with TONMYA, oral mucosal adverse reactions occurred more frequently in patients treated with TONMYA compared to placebo. Advise patients to moisten the mouth with sips of water before administration of TONMYA to reduce the risk of oral sensory changes (hypoesthesia). Consider discontinuation of TONMYA if severe reactions occur.

ADVERSE REACTIONS

The most common adverse reactions (incidence $\geq 2\%$ and at a higher incidence in TONMYA-treated patients compared to placebo-treated patients) were oral hypoesthesia, oral discomfort, abnormal product taste, somnolence, oral paresthesia, oral pain, fatigue, dry mouth, and aphthous ulcer.

DRUG INTERACTIONS

MAO inhibitors: Life-threatening interactions may occur.

Other serotonergic drugs: Serotonin syndrome has been reported.

CNS depressants: CNS depressant effects of alcohol, barbiturates, and other CNS depressants may be enhanced.

Tramadol: Seizure risk may be enhanced.

Guanethidine or other similar acting drugs: The antihypertensive action of these drugs may be blocked.

USE IN SPECIFIC POPULATIONS

Pregnancy: Based on animal data, TONMYA may cause fetal harm when administered to a pregnant woman. The limited amount of available observational data on oral cyclobenzaprine use in pregnancy is of insufficient quality to inform a TONMYA-associated risk of major birth defects, miscarriage, or adverse maternal or fetal outcomes. Advise pregnant women about the potential risk to the fetus with maternal exposure to TONMYA and to avoid use of TONMYA two weeks prior to conception and through the first trimester of pregnancy. Report pregnancies to the Tonix Medicines, Inc., adverse-event reporting line at 1-888-869-7633 (1-888-TNXPMED).

Lactation: A small number of published cases report the transfer of cyclobenzaprine into human milk in low amounts, but these data cannot be confirmed. There are no data on the effects of cyclobenzaprine on a breastfed infant, or the effects on milk production. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for TONMYA and any potential adverse effects on the breastfed child from TONMYA or from the underlying maternal condition.

Pediatric use: The safety and effectiveness of TONMYA have not been established.

Geriatric patients: Of the total number of TONMYA-treated patients in the clinical trials in adult patients with fibromyalgia, none were 65 years of age and older. Clinical trials of TONMYA did not include sufficient numbers of patients 65 years of age and older to determine whether they respond differently from younger adult patients.

Hepatic impairment: The recommended dosage of TONMYA in patients with mild hepatic impairment (HI) (Child Pugh A) is 2.8 mg once daily at bedtime, lower than the recommended dosage in patients with normal hepatic function. The use of TONMYA is not recommended in patients with moderate HI (Child Pugh B) or severe HI (Child Pugh C). Cyclobenzaprine exposure (AUC) was increased in patients with mild HI and moderate HI compared to subjects with normal hepatic function, which may increase the risk of TONMYA-associated adverse reactions.

Please see additional safety information in the full Prescribing Information.

To report suspected adverse reactions, contact Tonix Medicines, Inc. at 1-888-869-7633, or the FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

Indication and Usage

Zembrace[®] SymTouch[®] (sumatriptan succinate) injection (Zembrace) and Tosymra[®] (sumatriptan) nasal spray are prescription medicines used to treat acute migraine headaches with or without aura in adults who have been diagnosed with migraine.

Zembrace and Tosymra are not used to prevent migraines. It is not known if Zembrace or Tosymra are safe and effective in children under 18 years of age.

Important Safety Information

Zembrace and Tosymra can cause serious side effects, including heart attack and other heart problems, which may lead to death. Stop use and get emergency help if you have any signs of a heart attack:

- discomfort in the center of your chest that lasts for more than a few minutes or goes away and comes back
- severe tightness, pain, pressure, or heaviness in your chest, throat, neck, or jaw
- pain or discomfort in your arms, back, neck, jaw or stomach
- shortness of breath with or without chest discomfort
- breaking out in a cold sweat
- nausea or vomiting
- feeling lightheaded

Zembrace and Tosymra are not for people with risk factors for heart disease (high blood pressure or cholesterol, smoking, overweight, diabetes, family history of heart disease) unless a heart exam shows no problem.

Do not use Zembrace or Tosymra if you have:

- history of heart problems
 - narrowing of blood vessels to your legs, arms, stomach, or kidney (peripheral vascular disease)
 - uncontrolled high blood pressure
 - hemiplegic or basilar migraines. If you are not sure if you have these, ask your provider.
 - had a stroke, transient ischemic attacks (TIAs), or problems with blood circulation
 - severe liver problems
 - taken any of the following medicines in the last 24 hours: almotriptan, eletriptan, frovatriptan, naratriptan, rizatriptan, ergotamines, or dihydroergotamine. Ask your provider for a list of these medicines if you are not sure.
 - are taking certain antidepressants, known as monoamine oxidase (MAO)-A inhibitors or it has been 2 weeks or less since you stopped taking a MAO-A inhibitor. Ask your provider for a list of these medicines if you are not sure.
 - an allergy to sumatriptan or any of the components of Zembrace or Tosymra
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Tell your provider about all of your medical conditions and medicines you take, including vitamins and supplements.

Zembrace and Tosymra can cause dizziness, weakness, or drowsiness. If so, do not drive a car, use machinery, or do anything where you need to be alert.

Zembrace and Tosymra may cause serious side effects including:

- changes in color or sensation in your fingers and toes
- sudden or severe stomach pain, stomach pain after meals, weight loss, nausea or vomiting, constipation or diarrhea, bloody diarrhea, fever
- cramping and pain in your legs or hips; feeling of heaviness or tightness in your leg muscles; burning or aching pain in your feet or toes while resting; numbness, tingling, or weakness in your legs; cold feeling or color changes in one or both legs or feet
- increased blood pressure including a sudden severe increase even if you have no history of high blood pressure
- medication overuse headaches from using migraine medicine for 10 or more days each month. If your headaches get worse, call your provider.
- serotonin syndrome, a rare but serious problem that can happen in people using Zembrace or Tosymra, especially when used with anti-depressant medicines called SSRIs or SNRIs. Call your provider right away if you have: mental changes such as seeing things that are not there (hallucinations), agitation, or coma; fast heartbeat; changes in blood pressure; high body temperature; tight muscles; or trouble walking.
- hives (itchy bumps); swelling of your tongue, mouth, or throat
- seizures even in people who have never had seizures before

The most common side effects of Zembrace and Tosymra include: pain and redness at injection site (Zembrace only); tingling or numbness in your fingers or toes; dizziness; warm, hot, burning feeling to your face (flushing); discomfort or stiffness in your neck; feeling weak, drowsy, or tired; application site (nasal) reactions (Tosymra only) and throat irritation (Tosymra only).

Tell your provider if you have any side effect that bothers you or does not go away. These are not all the possible side effects of Zembrace and Tosymra. For more information, ask your provider.

This is the most important information to know about Zembrace and Tosymra but is not comprehensive. For more information, talk to your provider and read the Patient Information and Instructions for Use. You can also visit <https://www.tonixpharma.com> or call 1-888-869-7633.

You are encouraged to report adverse effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.
