

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM S-8
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

TONIX PHARMACEUTICALS HOLDING CORP.

(Exact name of registrant as specified in its charter)

Nevada
(State or other jurisdiction of
incorporation or organization)

26-1434750
(I.R.S. Employer
Identification No.)

**26 Main Street, Suite 101
Chatham, NJ 07928**
(Address of Principal Executive Offices) (Zip Code)

**Tonix Pharmaceuticals Holdings Corp. Amended and Restated 2020 Stock Incentive Plan and
Tonix Pharmaceuticals Holdings Corp. 2025 Employee Stock Purchase Plan**
(Full title of the plans)

**Seth Lederman
Chief Executive Officer
Tonix Pharmaceuticals Holding Corp.
26 Main Street, Suite 101
Chatham, New Jersey 07928
(862) 904-8182**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Please send copies of all communications to:

**Michael J. Lerner, Esq.
Steven M. Skolnick, Esq.
Lowenstein Sandler LLP
1251 Avenue of the Americas
New York, NY 10020
(973) 597-2500**

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	<input type="checkbox"/>		Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>		Smaller reporting company	<input checked="" type="checkbox"/>
			Emerging growth company	<input type="checkbox"/>

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 7(a)(2)(B) of the Securities Act. ☐

EXPLANATORY NOTE

Pursuant to General Instruction E to Form S-8 under the Securities Act of 1933, as amended, this Registration Statement is filed by Tonix Pharmaceuticals Holdings Corp. (the “Company”) for the purpose of registering additional shares of the Company’s common stock, par value \$0.001 per share (the “Common Stock”), under the Company’s Amended and Restated 2020 Stock Incentive Plan, as amended (the “2020 Plan”), and the Company’s 2025 Employee Stock Purchase Plan (the “ESPP”). The number of shares of Common Stock available for issuance under the 2020 Plan is subject to an automatic annual increase on January 1 of each year beginning in 2021 and ending on (and including) January 1, 2030, in an amount equal to the difference between (x) twenty percent (20%) of the total number of shares of Common Stock outstanding on December 31st of the preceding calendar year, and (y) the total number of shares of Common Stock reserved under the 2020 Plan on December 31st of such preceding calendar year (including shares subject to outstanding awards, issued pursuant to awards or available for future awards), or a lesser number of shares of Common Stock determined by the board of directors of the Company (the “Evergreen Provision”). This Registration Statement registers an aggregate of 873,321 additional shares of Common Stock available for issuance under the 2020 Plan as a result of the Evergreen Provision (the “Evergreen Shares”). In addition, this Registration Statement registers an aggregate of 1,000,000 shares of Common Stock added to the 2020 Plan on May 9, 2025 (the “Additional Shares”), and 2,000,000 shares of Common Stock available for issuance under the 2025 ESPP (the “ESPP Shares”).

The Evergreen Shares, the Additional Shares and the ESPP Shares registered pursuant to this Registration Statement are of the same class of securities as the 3,663 shares of Common Stock registered for issuance under the 2020 Plan pursuant to currently effective Registration Statements on Form S-8 (Registration Nos. 333-239152, 333-257437,

PART II

Information Required in the Registration Statement

Item 3. Incorporation of Documents by Reference.

The following documents filed by the Company with the Securities and Exchange Commission ("Commission") pursuant to the Securities Act and the Securities Exchange Act of 1934, as amended (the "Exchange Act"), are incorporated herein by reference:

- (a) the Company's latest annual report on Form 10-K for the year ended December 31, 2024, as filed with the Commission on [March 18, 2025](#);
- (b) the Company's quarterly reports on Form 10-Q for the quarter ended March 31, 2025, as filed with the Commission on [May 12, 2025](#);
- (c) the Company's current reports on Form 8-K filed with the Commission on [January 8, 2025](#), [February 3, 2025](#), [February 4, 2025](#), [February 6, 2025](#), [February 21, 2025](#), [March 4, 2025](#), [March 4, 2025](#), [March 10, 2025](#), [March 24, 2025](#), [April 1, 2025](#), [April 9, 2025](#), [April 24, 2025](#), [April 25, 2025](#), [April 29, 2025](#), [May 8, 2025](#), [May 14, 2025](#), and [May 21, 2025](#) (other than any portions thereof deemed furnished and not filed);
- (d) the Company's definitive proxy statement on Schedule 14A filed with the Commission on [March 31, 2025](#); and
- (e) the description of Common Stock contained in the Company's Registration Statement on Form 8-A (Registration No. 000-54879) filed with the Commission on [January 14, 2013](#), as supplemented and updated by the description of our Common Stock set forth in [Exhibit 4.06](#) of our Annual Report on Form 10-K for the year ended December 31, 2024, including any amendments or reports filed for the purpose of updating such description.

All documents filed by the Company pursuant to Section 13(a), 13(c), 14, or 15(d) of the Exchange Act subsequent to the filing of this Registration Statement and prior to the filing of a post-effective amendment, which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference into this Registration Statement and to be a part hereof from the date of filing such documents, except as to specific sections of such documents as set forth therein. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained in any subsequently filed document, which also is deemed to be incorporated by reference herein, modifies or supersedes such statement.

Item 6. Indemnification of Directors and Officers.

Nevada Revised Statutes ("NRS") 78.7502(1) provides that a corporation may indemnify, pursuant to the provisions of that statute, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation), by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise or as a manager of a limited liability company, against expenses, including attorneys' fees, judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with the action, suit or proceeding if the person (i) is not liable pursuant to NRS 78.138 or (ii) acted in good faith and in a manner which he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the conduct was unlawful. NRS 78.7502(2) further provides that a corporation may indemnify, pursuant to the provisions of that statute, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise or as a manager of a limited liability company, against expenses, including amounts paid in settlement and attorneys' fees actually and reasonably incurred by the person in connection with the defense or settlement of the action or suit if the person (a) is not liable pursuant to NRS 78.138 or (ii) acted in good faith and in a manner which he or she reasonably believed to be in or not opposed to the best interests of the corporation. To the extent that a director, officer, employee or agent of a corporation has been successful on the merits or otherwise in defense of any such action, suit or proceeding, or in defense of any claim, issue or matter therein, the corporation shall indemnify him or her against expenses, including attorneys' fees, actually and reasonably incurred by him or her in connection with the defense. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent, does not, of itself, create a presumption that the person is liable pursuant to NRS 78.138 or did not act in good faith and in a manner which he or she reasonably believed to be in or not opposed to the best interests of the corporation, or that, with respect to any criminal action or proceeding, he or she had reasonable cause to believe that the conduct was unlawful. Indemnification pursuant to NRS 78.7502 may not be made for any claim, issue or matter as to which such a person has been adjudged by a court of competent jurisdiction, after exhaustion of all appeals therefrom, to be liable to the corporation or for amounts paid in settlement to the corporation, unless and only to the extent that the court in which the action or suit was brought or other court of competent jurisdiction determines upon application that in view of all the circumstances of the case, the person is fairly and reasonably entitled to indemnity for such expenses as the court deems proper.

NRS 78.7502(3) provides that any discretionary indemnification pursuant to the provisions of NRS 78.7502 (unless ordered by a court or advanced pursuant to NRS 78.751(2)), may be made by the corporation only as authorized in the specific case upon a determination that indemnification of the director, officer, employee or agent is proper in the circumstances. The determination must be made (i) by the stockholders; (ii) by the board of directors by majority vote of a quorum consisting of directors who were not parties to the action, suit or proceeding; (iii) if a majority vote of a quorum consisting of directors who were not parties to the action, suit or proceeding so orders, by independent legal counsel in a written opinion; or (iv) if a quorum consisting of directors who were not parties to the action, suit or proceeding cannot be obtained, by independent legal counsel in a written opinion. NRS 78.751(2) provides that unless otherwise restricted by the corporation's articles of incorporation or bylaws, or an agreement made by the corporation, the corporation may pay the expenses of officers and directors incurred in defending a civil or criminal action, suit or proceeding as they are incurred and in advance of the final disposition of the action, suit or proceeding, upon receipt of an undertaking by or on behalf of the director or officer to repay the amount if it is ultimately determined by a court of competent jurisdiction that the director or officer is not entitled to be indemnified by the corporation.

Our articles of incorporation provide that our directors or officers shall not be personally liable to us or our stockholders for monetary damages for breach of such director's or officer's fiduciary duty, except for liability (i) for any breach of the duty of loyalty to our company or our stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, or (iii) for any transaction from which the officer or director derived any improper personal benefit. Our articles of incorporation and our amended and restated bylaws provide for the indemnification of any of our directors and officers who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such person is or was a director or officer of the our company, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such

person in connection with such action, suit or proceeding, subject to certain express limitations and conditions. We believe that these provisions in our articles of incorporation bylaws, as amended, are necessary to attract and retain qualified persons as directors and officers.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

See also the undertakings set out in response to Item 9 of this Registration Statement.

Item 8. Exhibits.

For a list of exhibits, see the Exhibit Index in this Registration Statement, which is incorporated into this Item by reference.

Item 9. Undertakings.

(a) The undersigned Registrant hereby undertakes:

(1) to file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

Provided, however, that Paragraphs (a)(1)(i) and (a)(1)(ii) of this section shall not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof:

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer, or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

EXHIBIT INDEX

Exhibit No.	Description
<u>3.01</u>	<u>Articles of Incorporation, filed as an exhibit to the Registration Statement on Form S-1, filed with the Securities and Exchange Commission (the "Commission") on April 9, 2008 and incorporated herein by reference.</u>
<u>3.02</u>	<u>Articles of Merger between Tamandare Explorations Inc. and Tonix Pharmaceuticals Holding Corp., effective October 11, 2011, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 17, 2011 and incorporated herein by reference.</u>
<u>3.03</u>	<u>Third Amended and Restated Bylaws, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on June 3, 2016 and incorporated herein by reference.</u>
<u>3.04</u>	<u>Certificate of Change of Tonix Pharmaceuticals Holding Corp., dated March 13, 2017 and effective March 17, 2017, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on March 16, 2017 and incorporated herein by reference.</u>
<u>3.05</u>	<u>Certificate of Amendment to Articles of Incorporation, effective June 16, 2017, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on June 16, 2017 and incorporated herein by reference.</u>

- [3.06](#) [Certificate of Amendment to Tonix Pharmaceuticals Holding Corp.'s Articles of Incorporation, as amended, effective May 3, 2019, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on May 8, 2019, and incorporated herein by reference.](#)
- [3.07](#) [Certificate of Amendment to Tonix Pharmaceuticals Holding Corp.'s Articles of Incorporation, as amended, effective October 31, 2019, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on May 8, 2019, and incorporated herein by reference.](#)
- [3.08](#) [Certificate of Change of Tonix Pharmaceuticals Holding Corp.'s Articles of Incorporation, as amended, effective November 1, 2019, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 31, 2019, and incorporated herein by reference.](#)
- [3.09](#) [Certificate of Amendment to Tonix Pharmaceuticals Holding Corp.'s Articles of Incorporation, as amended, effective January 16, 2020, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on January 16, 2020, and incorporated herein by reference.](#)
- [3.10](#) [Certificate of Amendment to Tonix Pharmaceuticals Holding Corp.'s Articles of Incorporation, as amended, effective August 31, 2020, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on August 31, 2020, and incorporated herein by reference.](#)
- [3.11](#) [Certificate of Amendment to Tonix Pharmaceuticals Holding Corp.'s Articles of Incorporation, as amended, effective March 26, 2021, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on March 26, 2021, and incorporated herein by reference.](#)
- [3.12](#) [Certificate of Amendment to Tonix Pharmaceuticals Holding Corp.'s Articles of Incorporation, as amended, effective February 10, 2022, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on February 10, 2022, and incorporated herein by reference.](#)
- [3.13](#) [Certificate of Change of Tonix Pharmaceuticals Holding Corp.'s Articles of Incorporation, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on May 16, 2022 and incorporated herein by reference.](#)
- [3.14](#) [Certificate of Amendment to Tonix Pharmaceuticals Holding Corp.'s Articles of Incorporation, as amended, effective August 5, 2022, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on August 5, 2022, and incorporated herein by reference.](#)
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- [3.15](#) [Certificate of Amendment to Tonix Pharmaceuticals Holding Corp.'s Articles of Incorporation, as amended, effective December 13, 2022, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on December 13, 2022, and incorporated herein by reference.](#)
- [3.16](#) [Certificate of Change of Tonix Pharmaceuticals Holding Corp.'s Articles of Incorporation, as amended, effective May 10, 2023, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on May 9, 2023, and incorporated herein by reference.](#)
- [3.17](#) [Certificate of Amendment to Tonix Pharmaceuticals Holding Corp.'s Articles of Incorporation, as amended, effective January 25, 2024, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on January 25, 2024, and incorporated herein by reference.](#)
- [4.01](#) [Specimen Common Stock Certificate of the Registrant, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on May 24, 2018 and incorporated herein by reference.](#)
- [5.01](#) [Opinion of Brownstein Hyatt Farber Schreck, LLP*](#)
- [10.01](#) [Tonix Pharmaceuticals Holding Corp. 2020 Amended and Restated Stock Incentive Plan, as amended, filed as an annex to the Definitive Proxy Statement, filed with the Commission on March 15, 2025 and incorporated herein by reference.](#)
- [10.02](#) [Tonix Pharmaceuticals Holding Corp. 2025 Employee Stock Purchase Plan, filed as an exhibit to the Definitive Proxy Statement, filed with the Commission on March 15, 2025 and incorporated herein by reference.](#)
- [23.01](#) [Consent of EisnerAmper LLP*](#)
- [23.02](#) [Consent of Brownstein Hyatt Farber Schreck, LLP \(included in Exhibit 5.01\)*](#)
- [24.01](#) [Power of Attorney \(contained on the signature pages to the registration statement\)*](#)
- [107](#) [Filing Fee Table*](#)

* Filed herewith.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of New York, State of New York on May 30, 2025.

TONIX PHARMACEUTICALS HOLDING CORP.

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

POWER OF ATTORNEY AND SIGNATURES

KNOW ALL PERSONS BY THESE PRESENTS, that the undersigned officers and directors of Tonix Pharmaceuticals Holding Corp., a Nevada corporation, do hereby constitute and appoint each of Seth Lederman and Bradley Saenger as his or her true and lawful attorney-in-fact and agent, with full power of substitution and re-substitution, for him and in his name, place, and stead, in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments to this Registration Statement on Form S-8), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons on behalf of the registrant in the capacities and on the dates indicated.

Person	Capacity	Date
<u>/s/ Seth Lederman</u> Seth Lederman	Chief Executive Officer and Director (Principal Executive Officer)	May 30, 2025
<u>/s/ Bradley Saenger</u> Bradley Saenger	Chief Financial Officer (Principal Financial and Accounting Officer)	May 30, 2025
<u>/s/ Richard Bagger</u> Richard Bagger	Director	May 30, 2025
<u>/s/ Margaret Smith Bell</u> Margaret Smith Bell	Director	May 30, 2025
<u>/s/ David Grange</u> David Grange	Director	May 30, 2025
<u>/s/ Adeoye Olukotun</u> Adeoye Olukotun	Director	May 30, 2025
<u>/s/ Newcomb Stillwell</u> Newcomb Stillwell	Director	May 30, 2025
<u>/s/ Carolyn Taylor</u> Carolyn Taylor	Director	May 30, 2025
<u>/s/ James Treco</u> James Treco	Director	May 30, 2025

Brownstein Hyatt Farber Schreck, LLP
702.382.2101 main
100 North City Parkway, Suite 1600
Las Vegas, Nevada 89106



May 30, 2025

Tonix Pharmaceuticals Holding Corp.
26 Main Street, Suite 101
Chatham, New Jersey 07928

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 filing by the Company of a Registration Statement on Form S-8 (the "Registration Statement") with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Act"), relating to the registration of (i) 873,321 additional shares (the "Evergreen Shares") of the Company's common stock, par value \$0.001 per share (the "Common Stock"), and 1,000,000 additional shares of Common Stock (together with the Evergreen Shares, the "SIP Shares"), issuable under the Company's Amended and Restated 2020 Stock Incentive Plan (the "SIP"), and (ii) 2,000,000 shares of Common Stock (together with the SIP Shares, the "Shares") issuable under the Company's 2025 Employee Stock Purchase Plan (together with the SIP, the "Plans"). This opinion letter is being delivered at your request pursuant to 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 and issuance of the Shares as contemplated by the Plans and as described in the Registration Statement. For purposes of this opinion letter, and except to the extent set forth in the opinion expressed below, we have assumed that all such proceedings have been or will be timely completed in the manner contemplated by the Plans, and as presently proposed in the Registration Statement.

For the purpose of issuing this opinion letter, 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, (ii) the Plans, (iii) the Company's articles of incorporation and bylaws, each as amended to date, and (iv) such other agreements, instruments, corporate records (including resolutions of the board of directors and any committee thereof) and other documents, as we have deemed necessary or appropriate, and we have obtained from officers and other representatives and agents of the Company and from public officials, and have relied upon, such certificates, representations, assurances and public filings as we have deemed necessary or appropriate.

Without limiting the generality of the foregoing, we have, with your permission, assumed without independent verification that (i) each natural person executing any of the documents we reviewed has sufficient legal capacity to do so; (ii) all documents submitted to us as originals are authentic, the signatures on all documents we reviewed are genuine, and all documents submitted to us as certified, conformed, photostatic, electronic or facsimile copies conform to the original document; (iii) all corporate records made available to us by the Company, and all public records we have reviewed, are accurate and complete; and (iv) after any issuance of the 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 or arrangement or otherwise, including the Plans, will not exceed the total number of shares of Common Stock then authorized under the Company's articles of incorporation.

Tonix Pharmaceuticals Holding Corp.
May 30, 2025
Page 2

We are qualified to practice law in the State of Nevada. The opinion set forth herein is 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 thereto or the effect thereon 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, 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 on 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 the Shares have been duly authorized by the Company and, if, when and to the extent issued in accordance with all applicable terms and conditions set forth in the relevant Plan and in exchange for the consideration required thereunder, and as described in the Registration Statement, the Shares will be validly issued, fully paid and non-assessable.

The opinion expressed herein is 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 opinion 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 opinion set forth herein.

We hereby consent to the filing of this opinion letter as an exhibit to the Registration Statement. 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.

Very truly yours,

/s/ Brownstein Hyatt Farber Schreck, LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement of Tonix Pharmaceuticals Holding Corp. (the “Company”) on Form S-8 to be filed on or about May 30, 2025 of our report dated March 18, 2025, on our audits of the consolidated financial statements as of December 31, 2024 and 2023 and for each of the years then ended, which report was included in the Annual Report on Form 10-K filed March 18, 2025. Our report includes an explanatory paragraph about the existence of substantial doubt concerning the Company's ability to continue as a going concern.

/s/ EisnerAmper LLP

EISNERAMPER LLP
Iselin, New Jersey
May 30, 2025

Calculation of Filing Fee Tables

FORM S-8
(Form Type)TONIX PHARMACEUTICALS HOLDING CORP.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

Line Item Type	Security Type	Security Class Title	Fee Calculation Rule	Amount Registered ⁽¹⁾	Proposed Maximum Offering Price Per Unit ⁽²⁾	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Fees to be Paid	Equity	Common stock, par value \$0.001 per share	Other	3,873,321	\$ 27.61	\$ 106,942,393	0.0001531	\$ 16,372.89
Total Offering Amounts:						\$ 106,942,393		16,372.89
Total Fees Previously Paid:								
Total Fee Offsets:								0.00
Net Fee Due:								\$ 16,372.89

- (1) Covers 3,873,321 shares of common stock issuable under the Tonix Pharmaceuticals Holding Corp. Amended and Restated 2020 Stock Incentive Plan, as amended, and the Tonix Pharmaceuticals 2025 Employee Stock Purchase Plan. In addition, pursuant to Rule 416(c) under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement also covers an indeterminate amount of interests to be offered or sold pursuant to the employee benefit plan(s) described herein, as these amounts may be adjusted as a result of stock splits, stock dividends, antidilution provisions, and similar transactions.
- (2) Pursuant to Rule 457(c) and Rule 457(h) under the Securities Act, the proposed maximum offering price per share and the proposed maximum aggregate offering price are estimated for the purpose of calculating the amount of the registration fee and are based on the average of the high and low sales price on the NASDAQ Capital Market on May 23, 2025.