

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
WASHINGTON D.C. 20549

Amendment No. 2
To
Form S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

TONIX PHARMACEUTICALS HOLDING CORP.

(Name of registrant in its charter)

<u>Nevada</u>	<u>2834</u>	<u>26-1434750</u>
(State or other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

**509 Madison Avenue, Suite 306
New York, New York 10022
(212) 980-9155**

(Address and telephone number of principal executive offices and principal place of business)

**Seth Lederman
Chief Executive Officer
Tonix Pharmaceuticals Holding Corp.
509 Madison Avenue, Suite 306
New York, New York 10022
(212) 980-9155**

(Name, address and telephone number of agent for service)

Copies to:

**Marc J. Ross, Esq.
James M. Turner, Esq.
Sichenzia Ross Friedman Ference LLP
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New York, New York 10006
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**John Hogoboom, Esq.
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New York, New York 10020
(212) 262-6700 (phone)
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APPROXIMATE DATE OF PROPOSED SALE TO THE PUBLIC: As soon as practicable after the effective date of this registration statement.

If any securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

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

Large accelerated filer
Non-accelerated filer

Accelerated filer
Smaller reporting company

(Do not check if a smaller reporting company)

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

EXPLANATORY NOTE

This Amendment No. 2 to the Registration Statement on Form S-1 (File No. 333-188547) is solely to file a revised Exhibit 1.01. Accordingly, a preliminary prospectus has been omitted.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth the various expenses to be incurred in connection with the registration of the securities being registered hereby, all of which will be borne by the registrant. All amounts shown are estimates except the SEC registration fee, the FINRA filing fee and the NASDAQ listing fee.

SEC registration fee	\$	3,339
FINRA filing fee	\$	4,723
NASDAQ listing fee	\$	50,000
Legal fees and expenses	\$	250,000
Accounting fees and expenses	\$	75,000
Transfer agent fees and expenses	\$	3,000
Printing and engraving expenses	\$	5,000
Miscellaneous expenses	\$	10,437
Total	\$	<u>400,000</u>

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Our bylaws, as amended, provide to the fullest extent permitted by Nevada law, our directors or officers shall not be personally liable to us or our shareholders for damages for breach of such director's or officer's fiduciary duty. The effect of this provision of our bylaws, as amended, is to eliminate our right and our shareholders (through shareholders' derivative suits on behalf of our company) to recover damages against a director or officer for breach of the fiduciary duty of care as a director or officer (including breaches resulting from negligent or grossly negligent behavior), except under certain situations defined by statute. We believe that the indemnification provisions in our bylaws, as amended, are necessary to attract and retain qualified persons as directors and officers.

Inssofar 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.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES.

During the past three years, the registrant has sold the following securities which were not registered under the Securities Act of 1933, as amended.

On October 7, 2011, we issued 1,133,334 shares of our common stock to the shareholders of Tonix Sub in exchange for 100% of the issued and outstanding shares of common stock of Tonix Sub. The shares were issued to accredited investors pursuant to Rule 506 of Regulation D or non-U.S. Persons pursuant to Rule 903 of Regulation S of the Securities Act of 1933, as amended.

On October 7, 2011, we issued 20,000 shares of our common stock to a placement agent in connection with an amendment to a placement agent agreement. The shares were issued to an accredited investor pursuant to Rule 506 of Regulation D or Section 4(2) of the Securities Act of 1933, as amended.

Between October and November 2011, we sold to certain investors (the "Purchasers") for aggregate cash proceeds of \$1,575,000, secured convertible debentures (the "Debentures") in the principal face amount of \$1,575,000 and the exchange of \$500,000 in previously issued notes of Tonix Sub that were converted into Debentures in the principal face amount of \$500,000 (the "2011 Financing"). The Debentures were sold to accredited investors pursuant to Rule 506 of Regulation D or non-U.S. Persons pursuant to Rule 903 of Regulation S of the Securities Act of 1933, as amended.

The Debentures mature on the earlier of (i) one year from the date of issuance or (ii) the date of closing of a private placement of equity, equity equivalent, convertible debt or debt financing in which we receive gross proceeds, in one or more transactions, of at least \$3,425,000 (a "Subsequent Financing"). The Debentures bear interest at 8% per annum and are convertible at the holder's option into a Subsequent Financing. In the event that a Subsequent Financing has not occurred within 12 months from the date of issuance of the Debenture, the holder has the option to convert the Debenture into a number of shares of our common stock equal to 1% of our shares of common stock on a fully diluted basis for every \$125,000 of Debentures (the "Conversion Shares").

In addition, upon conversion or repayment of the Debenture, the holder is entitled to receive, at the holder's option, either (i) a warrant (the "Warrant") to purchase such number of shares of common stock equal to the principal amount of the Debenture divided by the offering price in a Subsequent Financing (the "Warrant Shares") or (ii) shares of our common stock equal to 33% of the principal amount of the Debenture divided by the offering price in a Subsequent Financing (the "Incentive Shares").

In connection with the 2011 Financing, placement agents earned warrants to purchase shares of our common stock equal to 3% or 9% of the gross proceeds delivered by Purchasers introduced by such placement agents in the 2011 Financing divided by the purchase price per share in the Subsequent Financing (collectively, the "2011 Agent Warrants"). In the event that the Subsequent Financing has not occurred within 12 months from the date of issuance of the Debentures, the placement agents will receive, in lieu of the 2011 Agent Warrants, shares of common stock equal to 3% or 9% of the number of shares of our common stock such Purchasers introduced by such placement agent in the 2011 Financing are entitled to receive upon conversion of their Debentures.

Between January and March, 2012, we consummated the 2012 Financing pursuant to which we issued an aggregate of 264,7106 Units to certain investors for aggregate cash proceeds of \$4,692,765 and the exchange of \$1,925,000 in previously issued debentures that were converted into Units.

Each Unit had a purchase price of \$25,000 per Unit and consisted of 1,250 shares of our Common Stock, 1,250 Class A Warrants and 1,250 Class B Warrants.

The Class A Warrants have an exercise price of \$25.00 per share of Common Stock and will be exercisable for a period of five years from the date of issuance. The Class B Warrants were not exercisable by the Purchasers and would be exercised automatically on their expiration date by cashless exercise or expire without exercise. Effective April 24, 2012, the Class B Warrants expired unexercised.

In connection with the Financing, we issued Dawson James 23,339 2012 Agent Warrants.

Between October and November 2012, we issued promissory notes in the amount of \$320,000 (the "Notes") in exchange for \$320,000 borrowed from six affiliated investors. The Notes bear no interest and were payable on demand.

On November 14, 2012, we sold to accredited investors for aggregate cash proceeds of \$390,000, convertible debentures (the "Debentures") in the principal face amount of \$390,000 and the exchange of the Notes for Debentures in the principal face amount of \$320,000.

The Debentures mature on the earlier of (i) November 14, 2013 or (ii) the date of closing of a private placement of equity, equity equivalent, convertible debt or debt financing in which we receive gross proceeds, in one or more transactions, of at least \$100,000 (a "Subsequent Financing"). The Debentures bear interest at 8% per annum and are convertible at the holder's option into either (i) a Subsequent Financing at a price equal to a 25% discount to the price of securities sold in the Subsequent Financing or (ii) shares of our common stock at a conversion price per share equal to \$20.00.

In December 2012, the Company issued an aggregate of 8,904,167 units to certain accredited investors for aggregate cash proceeds of \$2,615,000, at a price per Unit of \$0.40, and the exchange of \$710,000 in previously issued convertible debentures (the "Prior Debentures") of the Company that were converted into Units at a price of \$0.30 per Unit.

Each Unit consisted of 0.05 share of the Common Stock, a Class A Warrant to purchase 0.05 share of Common Stock (the "Class A Warrants"), and a Class B Warrant to purchase 0.05 share of Common Stock (the "Class B Warrants" and together with the Class A Warrants, the "Warrants"). The Class A Warrants have an exercise price of \$12.00 per share of Common Stock and will be exercisable for a period of five years from the date of issuance. The Class A Warrants may be exercised on a cashless basis under certain circumstances. The Class B Warrants have an exercise price of \$8.00 per share of Common Stock and will be exercisable for a period of one year from the date of issuance.

On April 26, 2013, we issued an aggregate of 38,334 shares of common stock in exchange for \$306,667 upon exercise of warrants.

ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

The following exhibits are included as part of this Form S-1. References to "the Company" in this Exhibit List mean Tonix Pharmaceuticals Holding Corp., a Nevada corporation.

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|--------|--|
| 1.01 | Form of Underwriting Agreement. |
| 2.01 | Share Exchange Agreement, dated as of October 7, 2011 by and among Tamandare Explorations Inc., David J. Moss, Tonix Pharmaceuticals, Inc. and the shareholders of Tonix Pharmaceuticals, Inc. filed as an exhibit to the Current Report on Form 8-K, filed with the Securities and Exchange Commission (the "Commission") on October 14, 2011 and incorporated herein by reference. |
| 3.01 | Articles of Incorporation, filed as an exhibit to the Registration Statement on Form S-1, filed with the Commission on April 9, 2008 and incorporated herein by reference. |
| 3.02 | 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. |
| 3.03 | Amended and Restated Bylaws, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on February 23, 2012 and incorporated herein by reference. |
| 4.01# | Form of Series A Warrant. |
| 4.02 # | Form of Underwriters Warrant. |
| 5.01 # | Opinion of Sichenzia Ross Friedman Ference LLP. |
| 10.01 | Feasibility and Option Agreement, dated as of June 20, 2007, by and between Krele Pharmaceuticals, Inc. (now, Tonix Pharmaceuticals, Inc.) and Lipocine, Inc., filed as an exhibit to the amended Current Report on Form 8-K/A, filed with the Commission on April 3, 2012 and incorporated herein by reference. † |

- 10.02 Consulting Agreement, dated as of June 4, 2010, by and between Krele Pharmaceuticals, Inc. (now, Tonix Pharmaceuticals, Inc.) and Lederman & Co., LLC, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.
- 10.03 Technology Transfer and Assignment Agreement, dated as of June 4, 2010, by and between Krele Pharmaceuticals, Inc. (now, Tonix Pharmaceuticals, Inc.) and Lederman & Co., LLC, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.
- 10.04 Lease Agreement, dated as of September 28, 2010, by and between 509 Madison Avenue Associates, L.P. and Tonix Pharmaceuticals, Inc., filed as an exhibit to the amended Current Report on Form 8-K/A, filed with the Commission on February 3, 2012 and incorporated herein by reference.
- 10.05 Amendment to Feasibility and Option Agreement, dated as of October 4, 2010, by and between Tonix Pharmaceuticals, Inc. and Lipocine, Inc., filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference. †
- 10.06 Engagement Agreement, dated as of October 6, 2010, by and between Tonix Pharmaceuticals, Inc. and Frost and Sullivan, filed as an exhibit to the amended Current Report on Form 8-K/A, filed with the Commission on April 3, 2012 and incorporated herein by reference.
- 10.07 Amendment to Consulting Agreement, dated as of December 9, 2010, by and between Tonix Pharmaceuticals, Inc. and Lederman & Co., LLC, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.
- 10.08 Employment Agreement, dated as of April 1, 2011, by and between Tonix Pharmaceuticals, Inc. and Rhonda Rosen, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.
- 10.09 Employment Agreement, dated as of April 1, 2011, by and between Tonix Pharmaceuticals, Inc. and Benjamin A. Selzer, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.
- 10.10 Employment Agreement, dated as of April 1, 2011, by and between Tonix Pharmaceuticals, Inc. and Susan Oliver (now, Susan Kerridge), filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.
- 10.11 API Supply and Development Agreement, dated as of April 7, 2011, by and between Tonix Pharmaceuticals, Inc. and JFC Technologies, Inc., filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.
- 10.12 Consulting Agreement, dated as of June 2, 2011, by and between Tonix Pharmaceuticals, Inc. and Pharmanet Canada, Inc., filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.
- 10.13 Amendment to Employment Agreement, dated as of July 27, 2011, by and between Tonix Pharmaceuticals, Inc. and Rhonda Rosen, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.
- 10.14 Amendment to Employment Agreement, dated as of July 27, 2011, by and between Tonix Pharmaceuticals, Inc. and Benjamin A. Selzer, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.
- 10.15 Amendment to Employment Agreement, dated as of July 27, 2011, by and between Tonix Pharmaceuticals, Inc. and Susan Oliver (now, Susan Kerridge), filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.

- 10.16 Financial Public Relations Agreement, dated as of August 1, 2011, by and between Tonix Pharmaceuticals, Inc. and Porter, LeVay & Rose, Inc., filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.
- 10.17 Form of 8% Secured Convertible Debenture, issued October 7, 2011, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.
- 10.18 Form of Subscription Agreement, dated October 7, 2011, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.
- 10.19 Form of Pledge and Security Agreement, dated as of October 7, 2011, by and among Tamandare Explorations Inc., Tonix Pharmaceuticals, Inc., Krele LLC and the investors, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.
- 10.20 Form of Subsidiary Guaranty, dated as of October 7, 2011, by and among Tonix Pharmaceuticals, Inc., Krele LLC and Sandor Capital Master Fund L.P., on behalf of the investors, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.
- 10.21 Form of Subscription Agreement, dated January 20, 2012, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on January 23, 2012 and incorporated herein by reference.
- 10.22 Form of Class A Warrant, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on January 23, 2012 and incorporated herein by reference.
- 10.23 Form of Class B Warrant, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on January 23, 2012 and incorporated herein by reference.
- 10.24 Form of Registration Rights Agreement, dated January 20, 2012, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on January 23, 2012 and incorporated herein by reference.
- 10.25 Amendment to Consulting Agreement, dated as of March 30, 2012 but effective as of July 27, 2011, by and between Tonix Pharmaceuticals, Inc. and Lederman & Co., LLC, filed as an exhibit to the Annual Report on Form 10-K filed with the Commission on March 30, 2012 and incorporated herein by reference.
- 10.26 Employment Agreement, between Tonix Pharmaceuticals Holding Corp. and Leland Gershell, dated April 1, 2012, filed as an exhibit to the Current Report on Form 8-K filed with the Commission on April 5, 2012 and incorporated herein by reference.
- 10.27 Employment Agreement, between Tonix Pharmaceuticals Holding Corp. and Benjamin Selzer, dated April 2, 2012, filed as an exhibit to the Current Report on Form 8-K filed with the Commission on April 5, 2012 and incorporated herein by reference.
- 10.28 Amendment to Employment Agreement, between Tonix Pharmaceuticals Holding Corp. and Benjamin Selzer, dated October 5, 2012, filed as an exhibit to the Current Report on Form 8-K filed with the Commission on October 10, 2012 and incorporated herein by reference.
- 10.29 Form of Subscription Agreement, dated November 13, 2012, filed as an exhibit to the Current Report on Form 8-K filed with the Commission on November 14, 2012 and incorporated herein by reference.

- 10.30 Form of Convertible Debenture, dated November 13, 2012, filed as an exhibit to the Current Report on Form 8-K filed with the Commission on November 14, 2012 and incorporated herein by reference.
- 10.31 Form of Subscription Agreement, dated December 2012, filed as an exhibit to the Current Report on Form 8-K filed with the Commission on December 5, 2012 and incorporated herein by reference.
- 10.32 Form of Class A Warrant, dated December 4, 2012, filed as an exhibit to the Current Report on Form 8-K filed with the Commission on December 5, 2012 and incorporated herein by reference.
- 10.33 Form of Class B Warrant, dated December 4, 2012, filed as an exhibit to the Current Report on Form 8-K filed with the Commission on December 5, 2012 and incorporated herein by reference.
- 10.34 Form of Registration Rights Agreement, dated December 2012, filed as an exhibit to the Current Report on Form 8-K filed with the Commission on December 5, 2012 and incorporated herein by reference.
- 10.35 Form of Class A Warrant, dated December 21, 2012, filed as an exhibit to the Current Report on Form 8-K filed with the Commission on December 27, 2012 and incorporated herein by reference.
- 10.36 Form of Class B Warrant, dated December 21, 2012, filed as an exhibit to the Current Report on Form 8-K filed with the Commission on December 27, 2012 and incorporated herein by reference.
- 10.37 Form of Amendment No. 1 to the Purchase Agreement, Registration Rights Agreement and Escrow Agreement, filed as an exhibit to the Current Report on Form 8-K filed with the Commission on December 27, 2012 and incorporated herein by reference.
- 21.01 List of Subsidiaries, filed as an exhibit to the registration statement on Form S-1 filed with the Commission on May 10, 2013 and incorporated herein by reference.
- 23.01# Consent of EisnerAmper LLP.
- 23.02 # Consent of Sichenzia Ross Friedman Ference LLP (included in Exhibit 5.01).
- 24.01 Power of Attorney (included in signature page to the Registration Statement filed on May 10, 2013 and incorporated herein by reference).
- 99.01 Frost & Sullivan Fibromyalgia Market Study, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.
- 99.02 Lipocine Cyclobenzaprine Study Results, filed as an exhibit to the Current Report on Form 8-K, filed with the Commission on October 14, 2011 and incorporated herein by reference.

Previously filed.

† Confidential treatment granted for certain confidential portions of this exhibit pursuant to Rule 24b-2 under the Exchange Act. In accordance with Rule 24b-2, these confidential portions have been omitted from this exhibit and filed separately with the Commission.

ITEM 17. 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 posteffective 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) of this chapter) 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.
- (2) That, for the purposes 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 the 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.
 - (5) (ii) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.
- (6) For the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
 - (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

- (h) Insofar as indemnification for liabilities arising under the Securities Act of 1933 (the “Act”) 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 and 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 hereby, 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 of 1933 and will be governed by the final adjudication of such issue.
- (i) The undersigned Registrant hereby undertakes that it will:
- (1) for determining any liability under the Securities Act, treat the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant under Rule 424(b)(1), or (4) or 497(h) under the Securities Act as part of this registration statement as of the time the Commission declared it effective.
 - (2) for determining any liability under the Securities Act, treat each post-effective amendment that contains a form of prospectus as a new registration statement for the securities offered in the registration statement, and that offering of the securities at that time as the initial bona fide offering of those securities.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Amendment No. 2 to the Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New York, State of New York, on this 21st day of June, 2013.

TONIX PHARMACEUTICALS HOLDING CORP.

Date: June 21, 2013

By: /s/ SETH LEDERMAN
 Seth Lederman
 Chief Executive Officer (Principal Executive Officer)

Date: June 21, 2013

By: /s/ LELAND GERSHELL
 Leland Gershell
 Chief Financial Officer (Principal Accounting Officer)

Pursuant to the requirements of the Securities Act of 1933, this Amendment No. 2 to the Registration Statement on Form S-1 has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ SETH LEDERMAN</u> Seth Lederman	Chief Executive Officer (Principal Executive Officer) and Director	June 21, 2013
<u>/s/ LELAND GERSHELL</u> Leland Gershell	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	June 21, 2013
<u>*</u> Stuart Davidson	Director	June 21, 2013
<u>*</u> Patrick Grace	Director	June 21, 2013
<u>*</u> Donald W. Landry	Director	June 21, 2013
<u>*</u> Ernest Mario	Director	June 21, 2013
<u>*</u> Charles Mather IV	Director	June 21, 2013
<u>*</u> John Rhodes	Director	June 21, 2013
<u>*</u> Samuel Saks	Director	June 21, 2013

*By: /s/ SETH LEDERMAN
 Seth Lederman
Attorney-in-fact

TONIX PHARMACEUTICALS HOLDING CORP.

_____ Units
Each Unit Consisting of One Share of Common Stock
and
One Series A Warrant to Purchase One Share of Common Stock

UNDERWRITING AGREEMENT

_____, 2013

Roth Capital Partners, LLC
888 San Clemente Drive
Newport Beach, CA 92660

National Securities Corporation
120 Broadway, 27th Floor
New York, NY 10271

Ladies and Gentlemen:

Tonix Pharmaceuticals Holding Corp., a Nevada corporation (the "Company"), proposes, subject to the terms and conditions stated herein, to issue and sell to the several underwriters named on **Schedule I** hereto (the "Underwriters," or each, an "Underwriter") an aggregate of _____ units (the "Firm Units"), each Firm Unit consisting of (i) one share (the "Firm Shares") of common stock, par value \$0.001 per share (the "Common Stock"), of the Company and (ii) one Series A warrant (the "Firm Warrants") to purchase one share of Common Stock (the "Firm Warrant Shares"). The Company has granted the Underwriters the option to purchase an aggregate of up to (a) _____ units (the "Option Units"), each Option Unit consisting of (1) one share (the "Option Shares") of Common Stock and (2) one Series A warrant (the "Option Warrants") to purchase one share of Common Stock (the "Option Warrant Shares" and together with the Firm Warrant Shares, the "Warrant Shares"), (b) _____ Option Shares and/or (c) Option Warrants to purchase up to _____ Option Warrant Shares, in each case, as may be necessary to cover over-allotments made in connection with the offering. The Firm Units and the Option Units are collectively referred to as the "Units", the Firm Shares and the Option Shares are collectively referred to as the "Shares" and the Firm Warrants and the Option Warrants are collectively referred to as the "Warrants". The Units, the Shares, the Warrants, the Warrant Shares, the Underwriter Warrants (as defined below) and the Underwriter Warrant Shares (as defined below) are collectively referred to as the "Securities". The Option Units, the Option Shares and the Option Warrants may be sold either together or separately in any combination to be determined by the Underwriters. The Shares and the Warrants shall be immediately separable and transferable upon issuance. The terms of the Warrants are set forth in the form of Warrant attached as Exhibit A hereto.

The Company and the several Underwriters hereby confirm their agreement as follows:

1. Registration Statement and Prospectus. The Company has prepared and filed with the Securities and Exchange Commission (the "Commission") a registration statement on Form S-1 (File No. 333-188547) under the Securities Act of 1933, as amended (the "Securities Act") and the rules and regulations (the "Rules and Regulations") of the Commission thereunder, and such amendments to such registration statement (including post effective amendments) as may have been required to the date of this Agreement. Such registration statement, as amended (including any post effective amendments), has been declared effective by the Commission. Such registration statement, including amendments thereto (including post effective amendments thereto) at the time of effectiveness thereof (the "Effective Time"), the exhibits and any schedules thereto at the Effective Time or thereafter during the period of effectiveness and the documents and information otherwise deemed to be a part thereof or included therein by the Securities Act or otherwise pursuant to the Rules and Regulations at the Effective Time or thereafter during the period of effectiveness, is herein called the "Registration Statement." If the Company has filed or files an abbreviated registration statement pursuant to Rule 462(b) under the Securities Act (the "Rule 462 Registration Statement"), then any reference herein to the term Registration Statement shall include such Rule 462 Registration Statement. Any preliminary prospectus included in the Registration Statement or filed with the Commission pursuant to Rule 424(a) under the Securities Act is hereinafter called a "Preliminary Prospectus." The Preliminary Prospectus relating to the Securities that was included in the Registration Statement immediately prior to the pricing of the offering contemplated hereby is hereinafter called the "Pricing Prospectus."

The Company is filing with the Commission pursuant to Rule 424 under the Securities Act a final prospectus relating to the Securities, which includes the information permitted to be omitted therefrom at the Effective Time by Rule 430A under the Securities Act, and such final prospectus, as filed, is hereinafter called the "Final Prospectus." The Final Prospectus, the Pricing Prospectus and any preliminary prospectus in the form in which they were included in the Registration Statement or filed with the Commission pursuant to Rule 424 under the Securities Act is hereinafter called a "Prospectus."

For purposes of this Agreement, all references to the Registration Statement, the Rule 462 Registration Statement, the Pricing Prospectus, the Final 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 Interactive Data Electronic Applications system.

2. Representations and Warranties of the Company Regarding the Offering.

(a) The Company represents and warrants to, and agrees with, the several Underwriters, as of the date hereof and as of the Closing Date (as defined in Section 4(c) below) and as of each Option Closing Date (as defined in Section 4(b) below), except as otherwise indicated, as follows:

(i) At each time of effectiveness, at the date hereof and at the Closing Date and on each Option Closing Date, if any, the Registration Statement and any post-effective amendment thereto complied or will comply in all material respects with the requirements of the Securities Act and the Rules and Regulations and did not, does not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The Time of Sale Disclosure Package (as defined in Section 2(a)(iii)(A)(1) below) as of the date hereof, at the Closing Date and on each Option Closing Date, if any, and the Prospectus, as amended or supplemented, as of its date, at the time of filing pursuant to Rule 424(b) under the Securities Act and at the Closing Date and on each Option Closing Date, if any, does not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the two immediately preceding sentences shall not apply to statements in or omissions from the Registration Statement, the Time of Sale Disclosure Package or any Prospectus in reliance upon, and in conformity with, written information furnished to the Company by any Underwriter specifically for use in the preparation thereof, which written information is described in Section 7(f). The Registration Statement contains all exhibits and schedules required to be filed by the Securities Act or the Rules and Regulations. No order preventing or suspending the effectiveness or use of the Registration Statement or any Prospectus is in effect and no proceedings for such purpose have been instituted or are pending, or, to the knowledge of the Company, are contemplated or threatened by the Commission.

(ii) The Company has not distributed any prospectus or other offering material in connection with the offering and sale of the Securities other than the Time of Sale Disclosure Package.

(iii) (A) The Company has provided a copy to the Underwriters of each Issuer Free Writing Prospectus (as defined below) used in the sale of the Securities. The Company has filed all Issuer Free Writing Prospectuses required to be so filed with the Commission, and no order preventing or suspending the effectiveness or use of any Issuer Free Writing Prospectus is in effect and no proceedings for such purpose have been instituted or are pending, or, to the knowledge of the Company, are contemplated or threatened by the Commission. When taken together with the rest of the Time of Sale Disclosure Package or the Final Prospectus, since its first use and at all relevant times since then, no Issuer Free Writing Prospectus has, does or will include (1) any untrue statement of a material fact or omission to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading, or (2) information that conflicted, conflicts or will conflict with the information contained in the Registration Statement or the Final Prospectus. The representations and warranties set forth in the immediately preceding sentence shall not apply to statements in or omissions from the Time of Sale Disclosure Package, the Final Prospectus or any Issuer Free Writing Prospectus in reliance upon, and in conformity with, written information furnished to the Company by any Underwriter specifically for use in the preparation thereof. As used in this paragraph and elsewhere in this Agreement:

(1) "Time of Sale Disclosure Package" means the Pricing Prospectus, each Issuer Free Writing Prospectus, and the description of the transaction provided by the Underwriters included on **Schedule II**.

(2) “Issuer Free Writing Prospectus” means any “issuer free writing prospectus,” as defined in Rule 433 under the Securities Act, relating to the Securities that (A) is required to be filed with the Commission by the Company, or (B) is exempt from filing pursuant to Rule 433(d)(5)(i) or (d)(8) under the Securities Act, 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) under the Securities Act.

(B) At the time of filing of the Registration Statement and at the date hereof, the Company was not and is not an “ineligible issuer,” as defined in Rule 405 under the Securities Act or an “excluded issuer” as defined in Rule 164 under the Securities Act.

(C) Each Issuer Free Writing Prospectus satisfied, as of its issue date and at all subsequent times through the Prospectus Delivery Period (as defined below in Section 4(a)(i)), all other conditions as may be applicable to its use as set forth in Rules 164 and 433 under the Securities Act, including any legend, record-keeping or other requirements.

(iv) The financial statements of the Company, together with the related notes, included or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus comply in all material respects with the applicable requirements of the Securities Act and fairly present the financial condition of the Company as of the dates indicated and the results of operations and changes in cash flows for the periods therein specified in conformity with U.S. generally accepted accounting principles consistently applied throughout the periods involved; and the supporting schedules included in the Registration Statement present fairly the information required to be stated therein. The pro forma and pro forma as adjusted financial information included in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus has been properly compiled and prepared in all material respects in accordance with the applicable requirements of the Securities Act and the Rules and Regulations and include all adjustments necessary to present fairly in accordance with U.S. generally accepted accounting principles the pro forma and as adjusted financial position of the respective entity or entities presented therein at the respective dates indicated and their cash flows and the results of operations for the respective periods specified. The assumptions used in preparing the pro forma and pro forma as adjusted financial information included in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus provide a reasonable basis for presenting the significant effects directly attributable to the transactions or events described therein. The related pro forma and pro forma as adjusted adjustments give appropriate effect to those assumptions; and the pro forma and pro forma as adjusted financial information reflect the proper application of those adjustments to the corresponding historical financial statement amounts. No other financial statements, pro forma financial information or schedules are required under the Securities Act to be included or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus.

(v) To the Company's knowledge, EisnerAmper LLP, which has expressed its opinion with respect to the financial statements and schedules filed as a part of the Registration Statement and included in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus, is an independent public accounting firm with respect to the Company within the meaning of the Securities Act and the Rules and Regulations.

(vi) The Company had a reasonable basis for, and made in good faith, each "forward-looking statement" (within the meaning of Section 27A of the Securities Act or Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) contained or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package, the Final Prospectus, in each case at the time such "forward-looking statement" was made.

(vii) All statistical or market-related data included or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus, are based on or derived from sources that the Company reasonably believes to be reliable and accurate, and the Company has obtained the written consent to the use of such data from such sources, to the extent required, other than such consents the failure of which to obtain is not reasonably likely to result in a Material Adverse Effect (as defined below in Section 3(a)(i)).

(viii) The Common Stock is registered pursuant to Section 12(b) of the Exchange Act and is listed on the NASDAQ Capital Market. Except as set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, there is no action pending by the Company or, to the Company's knowledge, by the NASDAQ Capital Market to delist the Common Stock from the NASDAQ Capital Market, nor has the Company received any notification that the NASDAQ Capital Market is contemplating terminating such listing.

(ix) The Company has not taken, directly or indirectly, any action that is designed to or that has constituted or that would reasonably be expected to cause or result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

(x) The Company is not and, after giving effect to the offering and sale of the Securities and the application of the net proceeds thereof, will not be an "investment company," as such term is defined in the Investment Company Act of 1940, as amended.

(b) Any certificate signed by any officer of the Company and delivered to the Underwriters or to the Underwriters' counsel shall be deemed a representation and warranty by the Company to the Underwriters as to the matters covered thereby.

3. **Representations and Warranties Regarding the Company.**

(a) The Company represents and warrants to and agrees with, the several Underwriters, as of the date hereof and as of the Closing Date (as defined in Section 4(c) below) and as of each Option Closing Date (as defined in Section 4(b) below), except as set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, as follows:

(i) Each of the Company and its subsidiaries has been duly organized and is validly existing as a corporation or other entity in good standing under the laws of its jurisdiction of organization. Each of the Company and its subsidiaries has the power and authority (corporate or otherwise) to own its properties and conduct its business as currently being carried on and as described in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, and is duly qualified to do business as a foreign corporation or other entity in good standing in each jurisdiction in which it owns or leases real property or in which the conduct of its business makes such qualification necessary and in which the failure to so qualify would have or is reasonably likely to result in a material adverse effect upon the business, prospects, properties, operations, condition (financial or otherwise) or results of operations of the Company and its subsidiaries, taken as a whole, or in its ability to perform its obligations under this Agreement (“Material Adverse Effect”). Except for those of the Company’s subsidiaries set forth on **Schedule III** attached hereto, none of the Company’s subsidiaries is a “significant subsidiary” (as such term is defined in Rule 1-02 of Regulation S-X promulgated under the Securities Act).

(ii) The Company has the power and authority to enter into this Agreement, the Warrants and the Underwriter Warrants (as defined below) and to authorize, issue and sell the Securities as contemplated by this Agreement. Each of this Agreement, the Warrants and the Underwriter Warrants has been duly authorized, executed and delivered by the Company, and constitutes a valid, legal and binding obligation of the Company, enforceable against the Company in accordance with its terms, except as rights to indemnity hereunder may be limited by federal or state securities laws and except as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting the rights of creditors generally and subject to general principles of equity.

(iii) The execution, delivery and performance of this Agreement, the Warrants and the Underwriter Warrants and the consummation of the transactions herein contemplated will not (A) result in a breach or violation of any of the terms and provisions of, or constitute a default under, any law, order, rule or regulation to which the Company or any subsidiary is subject, or by which any property or asset of the Company or any subsidiary is bound or affected, except to the extent such breach, violation or default is not reasonably likely to have a Material Adverse Effect, (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 (the “Contracts”) or obligation 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, 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 amended, or by-laws, as amended.

(iv) Neither the Company nor any of its subsidiaries is in violation, breach or default under its articles of incorporation, as amended, by-laws, as amended, or other equivalent organizational or governing documents, except where the violation, breach or default in the case of a subsidiary of the Company is not reasonably likely to result in a Material Adverse Effect.

(v) No consents, approvals, orders, authorizations or filings are required on the part of the Company and its subsidiaries in connection with the execution, delivery or performance of this Agreement, the Warrants and the Underwriter Warrants and the issue and sale of the Securities, except (A) the registration under the Securities Act of the Securities, (B) such consents, approvals, authorizations, registrations or qualifications as may be required under state or foreign securities or Blue Sky laws and the rules of the Financial Industry Regulatory Authority, Inc. ("FINRA") in connection with the purchase and distribution of the Securities by the several Underwriters, (C) the necessary filings and approvals from the NASDAQ Capital Market to list the Shares and the Warrant Shares and (D) such consents, approvals, orders, authorizations and filings the failure of which to make or obtain is not reasonably likely to result in a Material Adverse Effect.

(vi) The Company has an authorized capitalization as set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus. All of the issued and outstanding shares of capital stock of the Company are duly authorized and validly issued, fully paid and nonassessable, and have been issued in compliance with all applicable securities laws, and conform in all material respects to the description thereof in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus. All of the issued shares of capital stock of each subsidiary of the Company have been duly and validly authorized and issued, are fully paid and non-assessable and are owned directly or indirectly by the Company, free and clear of all liens, encumbrances, equities or claims. Except for the issuances of options or restricted stock in the ordinary course of business, since the respective dates as of which information is provided in the Registration Statement, the Time of Sale Disclosure Package or the Prospectus, the Company has not entered into or granted any convertible or exchangeable securities, options, warrants, agreements, contracts or other rights in existence to purchase or acquire from the Company any shares of the capital stock of the Company. The Shares, when issued, will be duly authorized and validly issued, fully paid and nonassessable, will be issued in compliance with all applicable securities laws, and will be free of preemptive, registration or similar rights and will conform to the description of the capital stock of the Company contained in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus. The Warrant Shares and the shares of Common Stock underlying the Underwriter Warrants (the "Underwriter Warrant Shares"), when issued, paid for and delivered upon due exercise of the Warrants, will be duly authorized and validly issued, fully paid and nonassessable, will be issued in compliance with all applicable securities laws, and will be free of preemptive, registration or similar rights. The Warrant Shares and the Underwriter Warrant Shares have been reserved for issuance. The Securities, when issued, will conform in all material respects to the descriptions thereof set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus.

(vii) Each of the Company and its subsidiaries has (A) filed all returns (as hereinafter defined) required to be filed with taxing authorities prior to the date hereof or has duly obtained extensions of time for the filing thereof and (B) paid all taxes (as hereinafter defined) shown as due on such returns that were filed and has paid all taxes imposed on or assessed against the Company or such respective subsidiary, except, in all cases, for any such amounts that the Company or any subsidiary is contesting in good faith and except in any case in which the failure to so file or pay would not reasonably be expected to have a Material Adverse Effect. The provisions for taxes payable, if any, shown on the financial statements filed with or as part of the Registration Statement are sufficient for all accrued and unpaid taxes, whether or not disputed, and for all periods to and including the dates of such consolidated financial statements. No issues have been raised and are currently pending by any taxing authority in connection with any of the returns or taxes asserted as due from the Company or its subsidiaries, and no waivers of statutes of limitation with respect to the returns or collection of taxes have been given by or requested from the Company or its subsidiaries. The term “taxes” mean all federal, state, local, foreign, and other net income, gross income, gross receipts, sales, use, ad valorem, transfer, franchise, profits, license, lease, service, service use, withholding, payroll, employment, excise, severance, stamp, occupation, premium, property, windfall profits, customs, duties or other taxes, fees, assessments, or charges of any kind whatever, together with any interest and any penalties, additions to tax, or additional amounts with respect thereto. The term “returns” means all returns, declarations, reports, statements, and other documents required to be filed in respect to taxes.

(viii) Since the respective dates as of which information is given (including by incorporation by reference) in the Registration Statement, the Time of Sale Disclosure Package or the Prospectus, (a) neither the Company nor any of its subsidiaries has incurred any material liabilities or obligations, direct or contingent, or entered into any material transactions other than in the ordinary course of business and (b) the Company has not declared or paid any dividends or made any distribution of any kind with respect to its capital stock, there has not been any change in the capital stock of the Company or any of its subsidiaries (other than a change in the number of outstanding shares of Common Stock due to the issuance of shares upon the exercise of outstanding options or warrants or the issuance of restricted stock awards or restricted stock units under the Company’s existing stock awards plan, or any new grants thereof in the ordinary course of business), (d) there has not been any material change in the Company’s long-term or short-term debt, and (e) there has not been the occurrence of any Material Adverse Effect.

(ix) Except as a set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, there is not pending or, to the knowledge of the Company, threatened, any action, suit or proceeding to which the Company or any of its subsidiaries is a party or of which any property or assets of the Company or its subsidiaries is the subject before or by any court or governmental agency, authority or body, or any arbitrator or mediator, which is reasonably likely to result in a Material Adverse Effect or adversely affect the consummation of the transactions contemplated by this Agreement.

(x) The Company and each of its subsidiaries holds, and is in compliance with, all franchises, grants, authorizations, licenses, permits, easements, consents, certificates and orders ("Permits") of any governmental or self-regulatory agency, authority or body required for the conduct of its business, and all such Permits are in full force and effect, in each case except where the failure to hold, or comply with, any of them is not reasonably likely to result in a Material Adverse Effect.

(xi) The Company and its subsidiaries have good and marketable title to all property (whether real or personal) described in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus as being owned by them that is material to the business of the Company, in each case free and clear of all liens, claims, security interests, other encumbrances or defects, except those that are not reasonably likely to result in a Material Adverse Effect. The property held under lease by the Company and its subsidiaries is held by them under valid, subsisting and enforceable leases with only such exceptions with respect to any particular lease as do not interfere in any material respect with the conduct of the business of the Company and its subsidiaries.

(xii) The Company and each of its subsidiaries owns or possesses or has valid right to use all patents, patent applications, trademarks, service marks, trade names, trademark registrations, service mark registrations, copyrights, licenses, inventions, trade secrets and similar rights ("Intellectual Property") necessary for the conduct of the business of the Company and its subsidiaries as currently carried on and as described in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus. To the knowledge of the Company, no action or use by the Company or any of its subsidiaries will involve or give rise to any infringement of, or license or similar fees for, any Intellectual Property of others, except where such action, use, license or fee is not reasonably likely to result in a Material Adverse Effect. Neither the Company nor any of its subsidiaries has received any notice alleging any such infringement or fee.

(xiii) The Company and each of its subsidiaries has complied with, is not in violation of, and has not received any notice of violation relating to any law, rule or regulation relating to the conduct of its business, or the ownership or operation of its property and assets, including, without limitation, (A) the Currency and Foreign Transactions Reporting Act of 1970, as amended, or any money laundering laws, rules or regulations, (B) any laws, rules or regulations related to health, safety or the environment, including those relating to the regulation of hazardous substances, (C) the Sarbanes-Oxley Act and the rules and regulations of the Commission thereunder, (D) the Foreign Corrupt Practices Act of 1977 and the rules and regulations thereunder, and (E) the Employment Retirement Income Security Act of 1974 and the rules and regulations thereunder, in each case except where the failure to be in compliance is not reasonably likely to result in a Material Adverse Effect.

(xiv) Neither the Company nor any of its subsidiaries nor, to the knowledge of the Company, any director, officer, employee, representative, agent or affiliate of the Company or any of its subsidiaries is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department (“OFAC”); and the Company will not directly or indirectly use the proceeds of the offering of the Securities contemplated hereby, or lend, contribute or otherwise make available such proceeds to any person or entity, for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

(xv) The Company and each of its subsidiaries carries, or is covered by, insurance in such amounts and covering such risks as, in the Company’s reasonable judgment, is adequate for the conduct of its business and the value of its properties and as is customary for similarly sized companies engaged in similar businesses in similar industries.

(xvi) No labor dispute with the employees of the Company or any of its subsidiaries exists or, to the knowledge of the Company, is imminent, that is reasonably likely to result in a Material Adverse Effect.

(xvii) Except as set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, neither the Company, its subsidiaries nor, to its knowledge, any other party is in violation, breach or default of any Contract that is reasonably likely to result in a Material Adverse Effect.

(xviii) No supplier, customer, distributor or sales agent of the Company has notified the Company that it intends to discontinue or decrease the rate of business done with the Company, except where such decrease is not reasonably likely to result in a Material Adverse Effect.

(xix) There are no claims, payments, issuances, arrangements or understandings for services in the nature of a finder’s, consulting or origination fee with respect to the introduction of the Company to any Underwriter or the sale of the Securities hereunder or any other arrangements, agreements, understandings, payments or issuances with respect to the Company that may affect the Underwriters’ compensation, as determined by FINRA.

(xx) Except as set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, the Company has not made any direct or indirect payments (in cash, securities or otherwise) to (i) any person, as a finder’s fee, investing fee or otherwise, in consideration of such person raising capital for the Company or introducing to the Company persons who provided capital to the Company, (ii) any FINRA member, or (iii) any person or entity that has any direct or indirect affiliation or association with any FINRA member within the 12-month period prior to the date on which the Registration Statement was filed with the Commission (“Filing Date”) or thereafter.

(xxi) None of the net proceeds of the offering will be paid by the Company to any participating FINRA member or any affiliate or associate of any participating FINRA member, except as specifically authorized herein.

(xxii) Except as set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, to the Company's knowledge, no (i) officer or director of the Company or its subsidiaries, (ii) owner of 5% or more of the Company's unregistered securities or that of its subsidiaries or (iii) owner of any amount of the Company's unregistered securities acquired within the 180-day period prior to the Filing Date, has any direct or indirect affiliation or association with any FINRA member. The Company will advise the Underwriters and their counsel if it becomes aware that any officer, director or stockholder of the Company or its subsidiaries is or becomes an affiliate or associated person of a FINRA member participating in the offering.

(xxiii) Other than the Underwriters, no person has the right to act as an underwriter or as a financial advisor to the Company in connection with the transactions contemplated hereby.

(xxiv) The statements set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus under the caption "Description of Securities" insofar as they purport to constitute a summary of the terms of the Securities and under the captions "Business - Government Regulation", "Certain Relationships and Related Transactions", and "Underwriting", insofar as they purport to describe the provisions of the laws and documents referred to therein, are accurate, complete and fair.

(xxv) Except as set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, there are no contracts, agreements or understandings between the Company and any person granting such person the right (other than rights which have been waived in writing or otherwise satisfied) to require the Company to file a registration statement under the Securities Act with respect to any securities of the Company owned or to be owned by such person or to require the Company to include such securities in the securities registered pursuant to the Registration Statement or in any securities being registered pursuant to any other registration statement filed by the Company under the Securities Act.

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

(xxvii) The Company and each of its subsidiaries (i) are in compliance with all, and have not violated any, laws, regulations, ordinances, rules, orders, judgments, decrees, permits or other legal requirements of any governmental authority, including without limitation any international, national, state, provincial, regional, or local authority, relating to the protection of human health or safety, the environment, or natural resources, or to hazardous or toxic substances or wastes, pollutants or contaminants (including, without limitation, all health and safety laws) ("Environmental Laws") applicable to such entity, which compliance includes, without limitation, obtaining, maintaining and complying with all permits and authorizations and approvals required by Environmental Laws to conduct their respective businesses as described in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, except where the failure to comply would not, singularly or in the aggregate, have a Material Adverse Effect, and (ii) have not received notice of any actual or alleged violation of Environmental Laws, or of any potential liability for or other obligation concerning the presence, disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants.

- (A) There are no proceedings that are pending, or known to be contemplated, against the Company or any of its subsidiaries under Environmental Laws in which a governmental authority is also a party.
- (B) The Company and its subsidiaries are not aware of any existing liabilities concerning hazardous or toxic substances or wastes, pollutants or contaminants that could reasonably be expected to have a Material Adverse Effect on the capital expenditures, earnings or competitive position of the Company and its subsidiaries.
- (C) To the knowledge of the Company, no property which is or has been owned, leased, used, operated or occupied by the Company or its subsidiaries has been designated as a Superfund site pursuant to the Comprehensive Environmental Response, Compensation of Liability Act of 1980, as amended (42 U.S.C. Section 9601, et. seq.), or otherwise designated as a contaminated site under applicable state or local law.

(xxviii) The Company maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) that complies in all material respects with the requirements of the Exchange Act and has been designed by the Company's principal executive officer and principal financial officer, or under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. The Company's internal control over financial reporting is effective and the Company is not aware of any material weaknesses in its internal control over financial reporting.

(xxix) Since the date of the latest audited financial statements included in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, there has been no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(xxx) The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that comply with the requirements of the Exchange Act; such disclosure controls and procedures have been designed to ensure that material information relating to the Company and its subsidiaries is made known to the Company's principal executive officer and principal financial officer by others within those entities; and such disclosure controls and procedures are effective.

(xxxi) The operations of the Company and its subsidiaries are being conducted in material compliance with applicable employment laws, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "Employee Benefit Laws") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Employee Benefit Laws is pending or, to the knowledge of the Company, threatened.

(xxxii) Neither the Company nor any of its subsidiaries or affiliates, nor any director, officer, or employee, nor, to the Company's knowledge, any agent or representative of the Company or of any of its subsidiaries or affiliates, has taken any action in furtherance of an offer, payment, promise to pay, or authorization or approval of the payment or giving of money, property, gifts or anything else of value, directly or indirectly, to any "government official" (including any officer or employee of a government or government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office) to influence official action or secure an improper advantage; and the Company and its subsidiaries and affiliates conduct their businesses in compliance in all material respects with applicable anti-corruption laws and have instituted and maintain and will continue to maintain policies and procedures designed to promote and achieve compliance in all material respects with such laws and with the representation and warranty contained herein.

4. *Purchase, Sale and Delivery of Securities.*

(a) On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company agrees to issue and sell the Firm Shares and the Firm Warrants to the several Underwriters, and the Underwriters agree, severally and not jointly, to purchase the respective numbers of Firm Units set forth opposite the names of the Underwriters in **Schedule I** hereto. The purchase price for each Firm Unit shall be \$_____ per Unit (the "Purchase Price").

(b) The Company hereby grants to the Underwriters the option to purchase some or all of the Option Units, the Option Shares and/or the Option Warrants (either separately or together) and, upon the basis of the warranties and representations and subject to the terms and conditions herein set forth, the Underwriters shall have the right to purchase all or any portion of the Option Units at the Purchase Price, the Option Shares at a price of \$_____ per Share (the "Per Share Price") and/or the Option Warrants at a price of \$_____ per Warrant (the "Per Warrant Price") (either separately or together) as may be necessary to cover over-allotments made in connection with the transactions contemplated hereby. This option may be exercised by the Underwriters at any time and from time to time on or before the forty-fifth (45th) day following the date hereof, by written notice to the Company (the "Option Notice"). The Option Notice shall set forth the aggregate number of Option Shares and/or Option Warrants as to which the option is being exercised, and the date and time when the Option Shares and/or the Option Warrants are to be delivered (such date and time being herein referred to as the "Option Closing Date"); *provided, however*, that the Option Closing Date shall not be earlier than the Closing Date (as defined below) nor earlier than the first business day after the date on which the option shall have been exercised nor later than the fifth business day after the date on which the option shall have been exercised unless the Company and the Underwriters otherwise agree. Such shares of Optional Shares and/or Optional Warrants shall be purchased, severally and not jointly, from the Company for the account of each Underwriter in the same proportion as the number of shares of Firm Shares and Firm Warrants set forth opposite such Underwriter's name on **Schedule I** bears to the total number of shares of Firm Shares and the total number of Firm Warrants (subject to adjustment by the Underwriters to eliminate fractions).

Payment of the purchase price for and delivery of the Option Shares and/or the Option Warrants shall be made on an Option Closing Date in the same manner and at the same office as the payment for the Firm Shares and the Firm Warrants as set forth in subparagraph (c) below.

(c) The Firm Shares and the Firm Warrants will be delivered by the Company to the Underwriters, for their respective accounts, against payment of the purchase price therefor by wire transfer of same day funds payable to the order of the Company at the offices of Roth Capital Partners, LLC, 888 San Clemente Drive, Newport Beach, CA 92660, or such other location as may be mutually acceptable, at 6:00 a.m. PDT, on the third (or if the Firm Shares are priced, as contemplated by Rule 15c6-1(c) under the Exchange Act, after 4:30 p.m. Eastern time, the fourth) full business day following the date hereof, or at such other time and date as the Underwriters and the Company determine pursuant to Rule 15c6-1(a) under the Exchange Act, or, in the case of the Option Shares and the Option Warrants, at such date and time set forth in the Option Notice. The time and date of delivery of the Firm Shares and the Firm Warrants is referred to herein as the "Closing Date." On the Closing Date or any Option Closing Date, the Company shall deliver the Firm Shares and the Firm Warrants or the Option Shares and/or the Option Warrants, as applicable, which shall be registered in the name or names and shall be in such denominations as the Underwriters may request at least one (1) business day before the Closing Date, to the respective accounts of the several Underwriters, which delivery shall (a) with respect to the Firm Shares and any Option Shares, shall be made through the facilities of the Depository Trust Company's DWAC system, and (b) with respect to the Firm Warrants and any Option Warrants, shall be made by physical delivery to be received or directed by the Underwriters no later than one (1) business day following the respective Closing Date.

(d) On the Closing Date, the Company hereby agrees to issue and sell to the Underwriters (and/or their designees) at the Closing, warrants (the "Underwriter Warrants"), in form and substance acceptable to the Underwriters, for the purchase of an aggregate of _____ shares of Common Stock for an aggregate purchase price of \$100.00.

5. Covenants.

(a) The Company covenants and agrees with the several Underwriters as follows:

(i) To prepare the Prospectus in a form approved by the Underwriters and to file such Prospectus pursuant to Rule 424(b) under the Securities Act not later than the Commission's close of business on the second business day following the execution and delivery of this Agreement, or, if applicable, such earlier time as may be required by Rule 430A(a)(3) under the Securities Act.

(ii) During the period beginning on the date hereof and ending on the date that the Prospectus is no longer required by law to be delivered in connection with sales by an underwriter or dealer (the "Prospectus Delivery Period"), prior to amending or supplementing the Registration Statement, including any Rule 462 Registration Statement, the Time of Sale Disclosure Package or the Prospectus, the Company shall furnish to the Underwriters for review and comment a copy of each such proposed amendment or supplement, and the Company shall not file any such proposed amendment or supplement to which any Underwriter reasonably objects.

(iii) From the date of this Agreement until the end of the Prospectus Delivery Period, the Company shall promptly advise the Underwriters in writing (A) of the receipt of any comments of, or requests for additional or supplemental information from, the Commission, (B) of the time and date of any filing of any post-effective amendment to the Registration Statement or any amendment or supplement to the Time of Sale Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus, (C) of the time and date that any post-effective amendment to the Registration Statement becomes effective and (D) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or of any order preventing or suspending its use or the use of the Time of Sale Disclosure Package or any Issuer Free Writing Prospectus, or of any proceedings to remove, suspend or terminate from listing or quotation the Common Stock from any securities exchange upon which it is listed for trading or included or designated for quotation, or of the threatening or initiation of any proceedings for any of such purposes. If the Commission shall enter any such stop order at any time during the Prospectus Delivery Period, the Company will use its reasonable efforts to obtain the lifting of such order at the earliest possible moment. Additionally, the Company agrees that it shall comply with the provisions of Rules 424(b), 430A and 430B, as applicable, under the Securities Act and will use its reasonable efforts to confirm that any filings made by the Company under Rule 424(b) or Rule 433 were received in a timely manner by the Commission (without reliance on Rule 424(b)(8) or 164(b) of the Securities Act).

(iv) (A) During the Prospectus Delivery Period, the Company will comply with all requirements imposed upon it by the Securities Act, as now and hereafter amended, and by the Rules and Regulations, as from time to time in force, and by the Exchange Act, as now and hereafter amended, so far as necessary to permit the continuance of sales of or dealings in the Securities as contemplated by the provisions hereof, the Time of Sale Disclosure Package, the Registration Statement and the Prospectus. If during such period any event occurs as the result of which the Prospectus (or if the Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) would include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which such statement was made, not misleading, or if during such period it is necessary or appropriate in the opinion of the Company or its counsel or the Underwriters or their counsel to amend the Registration Statement or supplement the Prospectus (or if the Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) to comply with the Securities Act, the Company will promptly notify the Underwriters and will amend the Registration Statement or supplement the Prospectus (or if the Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) so as to correct such statement or omission or effect such compliance.

(B) If during the Prospectus Delivery Period there occurred or occurs an event or development the result of which is that such Issuer Free Writing Prospectus conflicted or would conflict with the information contained in the Registration Statement or any 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 prevailing at that subsequent time, not misleading, the Company has promptly notified or promptly will notify the Underwriters and has promptly amended or will promptly amend or supplement, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission.

(v) The Company shall take or cause to be taken all necessary action to qualify the Securities for sale under the securities laws of such jurisdictions as the Underwriters reasonably designate and to continue such qualifications in effect so long as required for the distribution of the Securities, except that the Company shall not be required in connection therewith to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified, to execute a general consent to service of process in any state or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise subject.

(vi) The Company will furnish to the Underwriters and counsel for the Underwriters copies of the Registration Statement, each Prospectus, any Issuer Free Writing Prospectus, and all amendments and supplements to such documents, in each case as soon as available and in such quantities as the Underwriters may from time to time reasonably request.

(vii) The Company will make generally available to its security holders as soon as practicable, but in any event not later than 15 months after the end of the Company's current fiscal quarter, an earnings statement (which need not be audited) covering a 12-month period that shall satisfy the provisions of Section 11(a) of the Securities Act and Rule 158 of the Rules and Regulations.

(viii) The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated, will pay or cause to be paid (A) all expenses (including transfer taxes allocated to the respective transferees) incurred in connection with the delivery to the Underwriters of the Securities, (B) all expenses and fees (including, without limitation, fees and expenses of the Company's counsel) in connection with the preparation, printing, filing, delivery, and shipping of the Registration Statement (including the financial statements therein and all amendments, schedules, and exhibits thereto), the Securities, the Time of Sale Disclosure Package, the Prospectus, any Issuer Free Writing Prospectus and any amendment thereof or supplement thereto, (C) all reasonable filing fees and reasonable fees and disbursements of the Underwriters' counsel incurred in connection with the qualification of the Securities for offering and sale by the Underwriters or by dealers under the securities or blue sky laws of the states and other jurisdictions that the Underwriters shall designate, (D) the fees and expenses of any transfer agent or registrar, (E) the reasonable files fees and reasonable fees and disbursements of Underwriters' counsel incident to any required review and approval by FINRA of the terms of the sale of the Securities, (F) listing fees, if any, and (G) all other costs and expenses incident to the performance of its obligations hereunder that are not otherwise specifically provided for herein. The Company will reimburse the Underwriters for their reasonable out-of-pocket expenses, including their legal fees and disbursements, in connection with the purchase and sale of the Securities contemplated hereby up to an aggregate of \$100,000 without the Company's prior consent, which shall not be unreasonably withheld, but in no event to exceed \$250,000 in the aggregate (including pursuant to clause (E) above). If this Agreement is terminated by the Underwriters in accordance with the provisions of Section 6, Section 9 or Section 10, the Company will reimburse the Underwriters for all out-of-pocket disbursements (including, but not limited to, reasonable fees and disbursements of counsel, travel expenses, postage, facsimile and telephone charges) fees and disbursements incurred by the Underwriters in connection with its investigation, preparing to market and marketing the Securities or in contemplation of performing its obligations hereunder.

(ix) The Company intends to apply the net proceeds from the sale of the Securities to be sold by it hereunder for the purposes set forth in the Time of Sale Disclosure Package and in the Final Prospectus.

(x) The Company has not taken and will not take, directly or indirectly, during the Prospectus Delivery Period, any action designed to or which might reasonably be expected to cause or result in, or that has constituted, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

(xi) The Company represents and agrees that, unless it obtains the prior written consent of the Underwriters, and each Underwriter, severally and not jointly, represents and agrees that, unless it obtains, the prior written consent of the Company, it has not made and will not make any offer relating to the Securities that would constitute an Issuer Free Writing Prospectus; provided that the prior written consent of the parties hereto shall be deemed to have been given in respect of the free writing prospectuses included in **Schedule IV**. Any such free writing prospectus consented to by the Company and the Underwriters is hereinafter referred to as a “Permitted Free Writing Prospectus.” The Company represents that it has treated or agrees that it will treat each Permitted Free Writing Prospectus as an “issuer free writing prospectus,” as defined in Rule 433, and has complied or will comply with the requirements of Rule 433 applicable to any Permitted Free Writing Prospectus, including timely Commission filing where required, legending and record-keeping.

(xii) The Company hereby agrees that, without the prior written consent of the Underwriters, it will not, during the period ending 90 days after the date hereof (“Lock-Up Period”), (i) offer, pledge, issue, sell, contract to sell, purchase, contract to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock; or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Common Stock, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise; or (iii) file any registration statement with the Commission relating to the offering of any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock (other than a registration statement of Form S-4 and Form S-8). The restrictions contained in the preceding sentence shall not apply to (1) the Securities to be sold hereunder, (2) the issuance of Common Stock upon the exercise of options, warrants or other exchange rights as disclosed as outstanding in the Registration Statement (excluding exhibits thereto) or the Prospectus, or (3) the issuance of employee stock options not exercisable during the Lock-Up Period and the grant of restricted stock awards or restricted stock units pursuant to equity incentive plans described in the Registration Statement (excluding exhibits thereto) and the Prospectus. Notwithstanding the foregoing, to the extent that any Underwriter is at such time providing research coverage to the Company or intends to commence research coverage to the Company and is subject to the restrictions set forth in NASD Rule 2711(f)(4), if (x) the Company issues an earnings release or material news, or a material event relating to the Company occurs, during the last 17 days of the Lock-Up Period, or (y) prior to the expiration of the Lock-Up Period, the Company announces that it will release earnings results during the 16-day period beginning on the last day of the Lock-Up Period, the restrictions imposed by this clause shall continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event, unless such Underwriter waives such extension in writing; provided, however, that this sentence shall not apply if the research published or distributed on the Company is compliant with Rule 139 of the Securities Act and the Company’s securities are “actively traded” as defined in Rule 101(c)(1) of Regulation M of the Exchange Act.

(xiii) To engage and maintain, at its expense, a registrar and transfer agent for the Common Stock.

(xiv) To use its best efforts to list the Shares and the Warrant Shares on the NASDAQ Capital Market.

(xv) To not take, directly or indirectly, any action designed to cause or result in, or that has constituted or might reasonably be expected to constitute, under the Exchange Act or otherwise, the stabilization or manipulation of the price of any securities of the Company to facilitate the sale or resale of the Securities.

6. *Conditions of the Underwriters’ Obligations.* The respective obligations of the several Underwriters hereunder to purchase the Securities are subject to the accuracy, as of the date hereof, at the Closing Date and on each Option Closing Date (as if made on the Closing Date or such Option Closing Date, as applicable), of and compliance in all material respects with all representations, warranties and agreements of the Company contained herein, the performance by the Company of its obligations hereunder and the following additional conditions:

(a) If filing of the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, is required under the Securities Act or the Rules and Regulations, the Company shall have filed the Prospectus (or such amendment or supplement) or such Issuer Free Writing Prospectus with the Commission in the manner and within the time period so required (without reliance on Rule 424(b)(8) or 164(b) under the Securities Act); the Registration Statement shall remain effective; no stop order suspending the effectiveness of the Registration Statement or any part thereof, any Rule 462 Registration Statement, or any amendment thereof, nor suspending or preventing the use of the Time of Sale Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus shall have been issued; no proceedings for the issuance of such an order shall have been initiated or threatened; any request of the Commission or an Underwriter for additional information (to be included in the Registration Statement, the Time of Sale Disclosure Package, the Prospectus, any Issuer Free Writing Prospectus or otherwise) shall have been complied with to the Underwriters' satisfaction.

(b) The Shares and the Warrant Shares shall be qualified for listing on the NASDAQ Capital Market.

(c) FINRA shall have raised no objection to the fairness and reasonableness of the underwriting terms and arrangements.

(d) None of the Underwriters shall have reasonably determined, and advised the Company, that the Registration Statement, the Time of Sale Disclosure Package or the Prospectus, or any amendment thereof or supplement thereto, or any Issuer Free Writing Prospectus, contains an untrue statement of fact which, in such Underwriter's reasonable opinion, is material, or omits to state a fact which, in such Underwriter's reasonable opinion, is material and is required to be stated therein or necessary to make the statements therein not misleading.

(e) On the Closing Date, there shall have been furnished to the Underwriters the opinion and negative assurance letter of Sichenzia Ross Friedman Ference LLP, outside corporate counsel for the Company dated the Closing Date, and addressed to the Underwriters, in form and substance reasonably satisfactory to the Underwriters.

(f) On the Closing Date, there shall have been furnished to the Underwriters the opinion and negative assurance letter of Ropes & Gray LLP, as intellectual property and regulatory counsel for the Company dated the Closing Date, and addressed to the Underwriters, in form and substance reasonably satisfactory to the Underwriters.

(g) On the Closing Date and on each Option Closing Date, there shall have been furnished to the Underwriters the negative assurance letter of Lowenstein Sandler LLP, counsel to the Underwriters, dated the Closing Date or the Option Closing Date, and addressed to the Underwriters, in form and substance reasonably satisfactory to the Underwriters.

(h) The Underwriters shall have received a letter of EisnerAmper LLP on the date hereof and on the Closing Date and on each Option Closing Date, addressed to the Underwriters, confirming that they are independent public accountants within the meaning of the Securities Act and are in compliance with the applicable requirements relating to the qualifications of accountants under Rule 2-01 of Regulation S-X of the Commission, and confirming, as of the date of each such letter (or, with respect to matters involving changes or developments since the respective dates as of which specified financial information is given in the Time of Sale Disclosure Package, as of a date not prior to the date hereof or more than five days prior to the date of such letter), the conclusions and findings of said firm with respect to the financial information and other matters required by the Underwriters.

(i) On the Closing Date and on each Option Closing Date, there shall have been furnished to the Underwriters a certificate, dated the Closing Date and each Option Closing Date, and addressed to the Underwriters, signed by the chief executive officer and the chief financial officer of the Company, in their capacity as officers of the Company, to the effect that:

(i) The representations and warranties of the Company in this Agreement that are qualified by materiality or by reference to any Material Adverse Effect are true and correct in all respects, and all other representations and warranties of the Company in this Agreement are true and correct, in all material respects, as if made at and as of the Closing Date and the Option Closing Date, and the Company has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to the Closing Date or the Option Closing Date, as applicable;

(ii) No stop order or other order (A) suspending the effectiveness of the Registration Statement or any part thereof or any amendment thereof, (B) suspending the qualification of the Securities for offering or sale, or (C) suspending or preventing the use of the Time of Sale Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus, has been issued, and no proceeding for that purpose has been instituted or, to their knowledge, is contemplated by the Commission or any state or regulatory body; and

(c) There has been no occurrence of any event resulting or reasonably likely to result in a Material Adverse Effect during the period from and after the date of this Agreement and prior to the Closing Date or the Option Closing Date, as applicable.

(j) On or before the date hereof, the Underwriters shall have received duly executed "lock-up" agreements, in a form set forth on **Schedule V**, among the Underwriters and each of the individuals specified in **Schedule VI**-

(k) The Company shall have furnished to the Underwriters and their counsel such additional documents, certificates and evidence as the Underwriters or their counsel may have reasonably requested.

If any condition specified in this Section 6 shall not have been fulfilled when and as required to be fulfilled, this Agreement may be terminated by any Underwriter by notice to the Company at any time at or prior to the Closing Date or an Option Closing Date, as applicable, and such termination shall be without liability of any party to any other party, except that Section 5(a)(viii), Section 7 and Section 8 shall survive any such termination and remain in full force and effect.

7. Indemnification and Contribution.

(a) The Company agrees to indemnify, defend and hold harmless each Underwriter, its affiliates, directors and officers and employees, and each person, if any, who controls any Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any losses, claims, damages or liabilities to which such Underwriter or such person may become subject, under the Securities Act or otherwise (including in settlement of any litigation if such settlement is effected with the written consent of the Company), insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon (i) an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, including the information deemed to be a part of the Registration Statement at the time of effectiveness and at any subsequent time pursuant to Rules 430A and 430B of the Rules and Regulations, or arise out of or are based upon the omission from the Registration Statement, or alleged omission to state therein, a material fact required to be stated therein or necessary to make the statements therein not misleading, (ii) an untrue statement or alleged untrue statement of a material fact contained in the Time of Sale Disclosure Package, the Prospectus, or any amendment or supplement thereto (including any documents filed under the Exchange Act and deemed to be incorporated by reference into the Registration Statement or the Prospectus), any Issuer Free Writing Prospectus or in any other materials used in connection with the offering of the Securities, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, (iii) an untrue statement or alleged untrue statement of a material fact contained 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, including any roadshow or investor presentations made to investors by the Company (whether in person or electronically), or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, (iv) in whole or in part, any material breach in the representations and warranties of the Company contained herein, or (v) in whole or in part, any failure of the Company to perform its obligations hereunder or under law, and will reimburse each Underwriter for any legal or other expenses reasonably incurred by it in connection with evaluating, investigating or defending against such loss, claim, damage, liability or action; *provided, however*, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage, liability or action arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, the Time of Sale Disclosure Package, the Prospectus, or any amendment or supplement thereto or any Issuer Free Writing Prospectus, in reliance upon and in conformity with written information furnished to the Company by such Underwriter specifically for use in the preparation thereof, which written information is described in Section 7(f).

(b) Each Underwriter, severally and not jointly, will indemnify, defend and hold harmless the Company, its affiliates, directors, officers and employees, and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any losses, claims, damages or liabilities to which the Company may become subject, under the Securities Act or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of such Underwriter), insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, the Time of Sale Disclosure Package, the Prospectus, or any amendment or supplement thereto or any Issuer Free Writing Prospectus, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, the Time of Sale Disclosure Package, the Prospectus, or any amendment or supplement thereto or any Issuer Free Writing Prospectus in reliance upon and in conformity with written information furnished to the Company by such Underwriter specifically for use in the preparation thereof, which written information is described in Section 7(f), and will reimburse the Company for any legal or other expenses reasonably incurred by the Company in connection with defending against any such loss, claim, damage, liability or action.

(c) Promptly after receipt by an indemnified party under subsection (a) or (b) above of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof; but the failure to notify the indemnifying party shall not relieve the indemnifying party from any liability that it may have to any indemnified party except to the extent such indemnifying party has been materially prejudiced by such failure. In case any such action shall be brought against any indemnified party, and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate in, and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel satisfactory to such indemnified party, and after notice from the indemnifying party to such indemnified party of the indemnifying party's election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof; *provided, however*, that if (i) the indemnified party has reasonably concluded (based on advice of counsel) that there may be legal defenses available to it or other indemnified parties that are different from or in addition to those available to the indemnifying party, (ii) a conflict or potential conflict exists (based on advice of counsel to the indemnified party) between the indemnified party and the indemnifying party (in which case the indemnifying party will not have the right to direct the defense of such action on behalf of the indemnified party), or (iii) the indemnifying party has not in fact employed counsel reasonably satisfactory to the indemnified party to assume the defense of such action within a reasonable time after receiving notice of the commencement of the action, the indemnified party shall have the right to employ a single counsel to represent it in any claim in respect of which indemnity may be sought under subsection (a) or (b) of this Section 7, in which event the reasonable fees and expenses of such separate counsel shall be borne by the indemnifying party or parties and reimbursed to the indemnified party as incurred.

The indemnifying party under this Section 7 shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party against any loss, claim, damage, liability or expense by reason of such settlement or judgment. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement, compromise or consent to the entry of judgment in any pending or threatened action, suit or proceeding in respect of which any indemnified party is a party or could be named and indemnity was or would be sought hereunder by such indemnified party, unless such settlement, compromise or consent (a) includes an unconditional release of such indemnified party from all liability for claims that are the subject matter of such action, suit or proceeding and (b) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) If the indemnification provided for in this Section 7 is unavailable or insufficient to hold harmless an indemnified party under subsection (a) or (b) above, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of the losses, claims, damages or liabilities referred to in subsection (a) or (b) above, (i) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering and sale of the Securities or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company on the one hand and the Underwriters on the other in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Final Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or the Underwriters and the parties' relevant intent, knowledge, access to information and opportunity to correct or prevent such untrue statement or omission. The Company and each Underwriter agree that it would not be just and equitable if contributions pursuant to this subsection (d) were to be determined by pro rata allocation or by any other method of allocation that does not take account of the equitable considerations referred to in the first sentence of this subsection (d). The amount paid by an indemnified party as a result of the losses, claims, damages or liabilities referred to in the first sentence of this subsection (d) shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending against any action or claim that is the subject of this subsection (d). Notwithstanding the provisions of this subsection (d), no Underwriter shall be required to contribute any amount in excess of the amount of such Underwriter's commissions referenced in Section 4(a) actually received by such Underwriter pursuant to this Agreement. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations to contribute as provided in this Section 7 are several in proportion to their respective underwriting obligations and not joint.

(e) The obligations of the Company under this Section 7 shall be in addition to any liability that the Company may otherwise have and the benefits of such obligations shall extend, upon the same terms and conditions, to each person, if any, who controls any Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act; and the several obligations of each Underwriter under this Section 7 shall be in addition to any liability that such Underwriter may otherwise have and the benefits of such obligations shall extend, upon the same terms and conditions, to the Company, and its officers, directors and each person who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act.

(f) For purposes of this Agreement, each Underwriter severally confirms, and the Company acknowledges, that there is no information concerning such Underwriter furnished in writing to the Company by such Underwriter specifically for preparation of or inclusion in the Registration Statement, the Time of Sale Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus, other than the statements set forth in the last paragraph on the cover page of the Prospectus and the statements set forth in the "Underwriting" section of the Prospectus and Time of Sale Disclosure Package, only insofar as such statements relate to the amount of selling concession and allowance and related activities that may be undertaken by such Underwriter.

8. Representations and Agreements to Survive Delivery. All representations, warranties, and agreements of the Company herein or in certificates delivered pursuant hereto, including, but not limited to, the agreements of the several Underwriters and the Company contained in Section 5(a)(viii) and Section 7 hereof, shall remain operative and in full force and effect regardless of any investigation made by or on behalf of the several Underwriters or any controlling person thereof, or the Company or any of its officers, directors, or controlling persons, and shall survive delivery of, and payment for, the Securities to and by the Underwriters hereunder.

9. Termination of this Agreement.

(a) Any Underwriter shall have the right to terminate this Agreement by giving notice to the Company as hereinafter specified at any time at or prior to the Closing Date or any Option Closing Date (as to the Option Units, Option Shares and/or Option Warrants to be purchased on such Option Closing Date only), if in the discretion of such Underwriter, (i) there has occurred any material adverse change in the securities markets or any event, act or occurrence that has materially disrupted, or in the opinion of such Underwriter, will in the future materially disrupt, the securities markets or there shall be such a material adverse change in general financial, political or economic conditions or the effect of international conditions on the financial markets in the United States is such as to make it, in the judgment of such Underwriter, inadvisable or impracticable to market the Securities or enforce contracts for the sale of the Securities, (ii) trading in the Company's Common Stock shall have been suspended by the Commission, the NASDAQ Capital Market or trading in securities generally on the NASDAQ Global Market, New York Stock Exchange or NYSE MKT shall have been suspended, (iii) minimum or maximum prices for trading shall have been fixed, or maximum ranges for prices for securities shall have been required, on the NASDAQ Global Market, New York Stock Exchange, or NYSE MKT, by such exchange or by order of the Commission or any other governmental authority having jurisdiction, (iv) a banking moratorium shall have been declared by federal or New York or California state authorities, (v) there shall have occurred any attack on, outbreak or escalation of hostilities or act of terrorism involving the United States, any declaration by the United States of a national emergency or war, any substantial change or development involving a prospective substantial change in United States or international political, financial or economic conditions or any other calamity or crisis, (vi) the Company suffers any loss by strike, fire, flood, earthquake, accident or other calamity, whether or not covered by insurance, or (vii) in the judgment of such Underwriter, there has been, since the time of execution of this Agreement or since the respective dates as of which information is given in the Prospectus, any material adverse change in the assets, properties, condition, financial or otherwise, or in the results of operations, business affairs or business prospects of the Company and its subsidiaries considered as a whole, whether or not arising in the ordinary course of business. Any such termination shall be without liability of any party to any other party except that the provisions of Section 5(a)(viii) and Section 7 hereof shall at all times be effective and shall survive such termination.

(b) If any Underwriter elects to terminate this Agreement as provided in this Section, the Company and the other Underwriters shall be notified promptly by such Underwriter by telephone, confirmed by letter.

10. Substitution of Underwriters. If any Underwriter or Underwriters shall default in its or their obligations to purchase Units, Shares and/or Warrants hereunder on the Closing Date or any Option Closing Date and the aggregate number of Units, Shares and/or Warrants which such defaulting Underwriter or Underwriters agreed but failed to purchase does not exceed ten percent (10%) of the total number of Units, Shares and/or Warrants to be purchased by all Underwriters on such Closing Date or Option Closing Date, the other Underwriters shall be obligated severally, in proportion to their respective commitments hereunder, to purchase the Units, Shares and/or Warrants which such defaulting Underwriter or Underwriters agreed but failed to purchase on such Closing Date or Option Closing Date. If any Underwriter or Underwriters shall so default and the aggregate number of Units, Shares and/or Warrants with respect to which such default or defaults occur is more than ten percent (10%) of the total number of Units, Shares and/or Warrants to be purchased by all Underwriters on such Closing Date or Option Closing Date and arrangements satisfactory to the remaining Underwriters and the Company for the purchase of such shares by other persons are not made within forty-eight (48) hours after such default, this Agreement shall terminate.

If the remaining Underwriters or substituted Underwriters are required hereby or agree to take up all or part of the Units, Shares and/or Warrants of a defaulting Underwriter or Underwriters on such Closing Date or Option Closing Date as provided in this Section 10, (i) the Company shall have the right to postpone such Closing Date or Option Closing Date for a period of not more than five (5) full business days in order to permit the Company to effect whatever changes in the Registration Statement, the Prospectus, or in any other documents or arrangements, which may thereby be made necessary, and the Company agrees to promptly file any amendments to the Registration Statement or the Prospectus which may thereby be made necessary, and (ii) the respective numbers of Units, Shares and/or Warrants to be purchased by the remaining Underwriters or substituted Underwriters shall be taken as the basis of their underwriting obligation for all purposes of this Agreement. Nothing herein contained shall relieve any defaulting Underwriter of its liability to the Company or any other Underwriter for damages occasioned by its default hereunder. Any termination of this Agreement pursuant to this Section 10 shall be without liability on the part of any non defaulting Underwriters or the Company, except that the representations, warranties, covenants, indemnities, agreements and other statements set forth in Section 2 and 3, the obligations with respect to expenses to be paid or reimbursed pursuant to Section 5 and the provisions of Section 7 and Sections 11 through 18, inclusive, shall not terminate and shall remain in full force and effect.

11. Notices. Except as otherwise provided herein, all communications hereunder shall be in writing and, (i) if to the Underwriters, shall be mailed, delivered or telecopied to (a) Roth Capital Partners, LLC, 888 San Clemente Drive, Newport Beach, CA 92660, teletype number: (949) 720-7227, Attention: Managing Director, and (b) National Securities Corporation, 120 Broadway, 27th Floor, New York, NY 10271, teletype number: (212) 461-2828, Attention: Head of Investment Banking; and (ii) if to the Company, shall be mailed, delivered or telecopied to it at Tonix Pharmaceuticals Holding Corp., 509 Madison Avenue, Suite 306, New York, NY 10022, teletype number: (212) 923-5700, Attention: Chief Financial Officer; or in each case to such other address as the person to be notified may have requested in writing. Any party to this Agreement may change such address for notices by sending to the parties to this Agreement written notice of a new address for such purpose.

12. Persons Entitled to Benefit of Agreement. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns and the controlling persons, officers and directors referred to in Section 7. Nothing in this Agreement is intended or shall be construed to give to any other person, firm or corporation any legal or equitable remedy or claim under or in respect of this Agreement or any provision herein contained. The term "successors and assigns" as herein used shall not include any purchaser, as such purchaser, of any of the Securities from any Underwriter.

13. Absence of Fiduciary Relationship. The Company acknowledges and agrees that: (a) each Underwriter has been retained solely to act as underwriter in connection with the sale of the Securities and that no fiduciary, advisory or agency relationship between the Company and any Underwriter has been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether any Underwriter has advised or is advising the Company on other matters; (b) the price and other terms of the Securities set forth in this Agreement were established by the Company following discussions and arms-length negotiations with the Underwriters and the Company is capable of evaluating and understanding and understands and accepts the terms, risks and conditions of the transactions contemplated by this Agreement; (c) it has been advised that each Underwriter and its affiliates are engaged in a broad range of transactions that may involve interests that differ from those of the Company and that no Underwriter has any obligation to disclose such interest and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; (d) it has been advised that each Underwriter is acting, in respect of the transactions contemplated by this Agreement, solely for the benefit of such Underwriter, and not on behalf of the Company.

14. Amendments and Waivers. No supplement, modification or waiver of this Agreement shall be binding unless executed in writing by the party to be bound thereby. The failure of a party to exercise any right or remedy shall not be deemed or constitute a waiver of such right or remedy in the future. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provision hereof (regardless of whether similar), nor shall any such waiver be deemed or constitute a continuing waiver unless otherwise expressly provided.

15. **Partial Unenforceability.** The invalidity or unenforceability of any section, paragraph, clause or provision of this Agreement shall not affect the validity or enforceability of any other section, paragraph, clause or provision.

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

17. **Submission to Jurisdiction.** The Company irrevocably (a) submits to the jurisdiction of any court of the State of New York for the purpose of any suit, action, or other proceeding arising out of this Agreement, or any of the agreements or transactions contemplated by this Agreement, the Registration Statement and the Prospectus (each a "**Proceeding**"), (b) agrees that all claims in respect of any Proceeding may be heard and determined in any such court, (c) waives, to the fullest extent permitted by law, any immunity from jurisdiction of any such court or from any legal process therein, (d) agrees not to commence any Proceeding other than in such courts, and (e) waives, to the fullest extent permitted by law, any claim that such Proceeding is brought in an inconvenient forum. THE COMPANY (ON BEHALF OF ITSELF AND, TO THE FULLEST EXTENT PERMITTED BY LAW, ON BEHALF OF ITS RESPECTIVE EQUITY HOLDERS AND CREDITORS) HEREBY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY CLAIM BASED UPON, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT AND THE TRANSACTIONS CONTEMPLATED BY THIS AGREEMENT, THE REGISTRATION STATEMENT, THE TIME OF SALE DISCLOSURE PACKAGE AND THE PROSPECTUS.

18. **Counterparts.** This Agreement may be executed in one or more counterparts and, if executed in more than one counterpart, the executed counterparts shall each be deemed to be an original and all such counterparts shall together constitute one and the same instrument.

[Signature Page Follows]

Please sign and return to the Company the enclosed duplicates of this letter whereupon this letter will become a binding agreement between the Company and the several Underwriters in accordance with its terms.

Very truly yours,

TONIX PHARMACEUTICALS HOLDING CORP.

By:
Name:
Title:

Confirmed as of the date first above-mentioned.

ROTH CAPITAL PARTNERS, LLC

By: _____
Name: Aaron Gurewitz
Title: Head of Equity Capital Markets

NATIONAL SECURITIES CORPORATION

By: _____
Name:
Title:

[Signature page to Underwriting Agreement]

SCHEDULE I

<u>Name</u>	<u>Number of Firm Units to be Purchased</u>	<u>Number of Option Units to be Purchased</u>	<u>Number of Option Shares to be Purchased</u>	<u>Number of Option Warrants to be Purchased</u>
Roth Capital Partners, LLC				
National Securities Corporation				
Total				

SCHEDULE II

Final Term Sheet

Issuer: Tonix Pharmaceuticals Holding Corp. (the "Company")

Symbol: TNXP

Security: _____ units (the "Units"), each Unit consisting of (i) one share of common stock, par value \$0.001 per share (the "Common Stock"), of the Company, and (ii) one Series A warrant (the "Warrants") to purchase one share of Common Stock

Over-allotment option: _____ Units, _____ shares of Common Stock and/or _____ Warrants

Public offering price: \$_____ per Unit

Underwriting discounts and commissions: \$_____ per Unit

Net proceeds (excluding the over-allotment): \$____ million (after deducting the underwriters' discounts and commissions and estimated offering expenses payable by the Company)

Underwriters' warrants: Warrants to purchase _____ shares of Common Stock

Trade date: _____, 2013

Settlement date: _____, 2013

Underwriters: Roth Capital Partners, LLC and National Securities Corporation

SCHEDULE III

Subsidiaries

None

SCHEDULE IV

Free Writing Prospectus

SCHEDULE V

Form of Lock-Up Agreement

June [], 2013

Roth Capital Partners, LLC
888 San Clemente Drive
Newport Beach, CA 92660

National Securities Corporation
120 Broadway, 27th Floor
New York, NY 10271

Ladies and Gentlemen:

This Lock-Up Agreement is being delivered to you in connection with the proposed Underwriting Agreement (the "Underwriting Agreement") to be entered into among Tonix Pharmaceuticals Holding Corp., a Nevada corporation (the "Company"), Roth Capital Partners, LLC and National Securities Corporation (collectively, the "Underwriters"), with respect to the proposed public offering of securities of the Company (the "Offering"), including units, consisting of shares of common stock, par value \$0.001 per share, of the Company (the "Common Stock") and warrants to purchase shares of Common Stock. Capitalized terms used and not otherwise defined herein shall have the meanings given them in the Underwriting Agreement.

In order to induce you to enter into the Underwriting Agreement, the undersigned agrees that, for a period (the "Lock-Up Period") beginning on the date hereof and ending on, and including, the date that is 90 days after the date of the final prospectus supplement relating to the Offering, the undersigned will not, without the prior written consent of the Underwriters, (i) sell, offer to sell, contract or agree to sell, hypothecate, pledge, grant any option to purchase or otherwise dispose of or agree to dispose of, directly or indirectly, or file (or participate in the filing of) a registration statement with the Securities and Exchange Commission (the "Commission") in respect of, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Commission promulgated thereunder (the "Exchange Act") with respect to, any Common Stock or any other securities of the Company that are substantially similar to Common Stock, or any securities convertible into or exchangeable or exercisable for, or any warrants or other rights to purchase, the foregoing, (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of Common Stock or any other securities of the Company that are substantially similar to Common Stock, or any securities convertible into or exchangeable or exercisable for, or any warrants or other rights to purchase, the foregoing, whether any such transaction is to be settled by delivery of Common Stock or such other securities, in cash or otherwise or (iii) publicly announce an intention to effect any transaction specified in clause (i) or (ii).

The foregoing paragraph shall not apply to (a) the registration of the offer and sale of Common Stock as contemplated by the Underwriting Agreement and the sale of the Common Stock to the several Underwriters in the Offering, (b) bona fide gifts, provided the recipient thereof agrees in writing with the Underwriters to be bound by the terms of this Lock-Up Agreement, (c) dispositions to any trust for the direct or indirect benefit of the undersigned and/or the immediate family of the undersigned, provided that such trust agrees in writing with the Underwriters to be bound by the terms of this Lock-Up Agreement, (d) transfers of Common Stock or securities convertible into Common Stock on death by will or intestacy, (e) sales or transfers of Common Stock solely in connection with the "cashless" exercise of Company stock options outstanding on the date hereof for the purpose of exercising such stock options (provided that any remaining Common Stock received upon such exercise will be subject to the restrictions provided for in this Lock-Up Agreement) or (f) sales or transfers of Common Stock or securities convertible into Common Stock pursuant to a sales plan entered into prior to the date hereof pursuant to Rule 10b5-1 under the Exchange Act, a copy of which has been provided to the Underwriters. In addition, the restrictions sets forth herein shall not prevent the undersigned from entering into a sales plan pursuant to Rule 10b5-1 under the Exchange Act after the date hereof, provided that (i) a copy of such plan is provided to the Underwriters promptly upon entering into the same and (ii) no sales or transfers may be made under such plan until the Lock-Up Period ends or this Lock-Up Agreement is terminated in accordance with its terms. For purposes of this paragraph, "immediate family" shall mean the undersigned and the spouse, any lineal descendent, father, mother, brother or sister of the undersigned.

In addition, the undersigned hereby waives any rights the undersigned may have to require registration of Common Stock in connection with the filing of a registration statement relating to the Offering. The undersigned further agrees that, for the Lock-Up Period, the undersigned will not, without the prior written consent of the Underwriters, make any demand for, or exercise any right with respect to, the registration of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock, or warrants or other rights to purchase Common Stock or any such securities.

Notwithstanding the above, if (a) during the period that begins on the date that is fifteen (15) calendar days plus three (3) business days before the last day of the Lock-Up Period and ends on the last day of the Lock-Up Period, the Company issues an earnings release or material news or a material event relating to the Company occurs; or (b) prior to the expiration of the Lock-Up Period, the Company announces that it will release earnings results during the sixteen (16) day period beginning on the last day of the Lock-Up Period, then the restrictions imposed by this Lock-Up Agreement shall continue to apply until the expiration of the date that is fifteen (15) calendar days plus three (3) business days after the date on which the issuance of the earnings release or the material news or material event occurs; provided, however, that this paragraph shall not apply if (i) the safe harbor provided by Rule 139 under the Act is available in the manner contemplated by Rule 2711(f)(4) of the Financial Industry Regulatory Authority, Inc. ("FINRA") and (ii) within the 3 business days preceding the 15th calendar day before the last day of the Lock-Up Period, the Company delivers to the Underwriters a certificate, signed by the Chief Financial Officer or Chief Executive Officer of the Company, certifying on behalf of the Company that the Company's shares of Common Stock are "actively traded securities," within the meaning of Rule 2711(f)(4) of FINRA.

The undersigned hereby confirms that the undersigned has not, directly or indirectly, taken, and hereby covenants that the undersigned will not, directly or indirectly, take, any action designed, or which has constituted or will constitute or might reasonably be expected to cause or result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of shares of Common Stock.

If (i) the Company notifies you in writing that it does not intend to proceed with the Offering, (ii) the registration statement filed with the Commission with respect to the Offering is withdrawn, (iii) if the closing of the Offering does not occur prior to ninety (90) days from the date of this Lock-Up Agreement or (iv) for any reason the Underwriting Agreement shall be terminated prior to the effective time of the Registration Statement (as defined in the Underwriting Agreement), this Lock-Up Agreement shall be terminated and the undersigned shall be released from its obligations hereunder.

SCHEDULE VI

List of officers, directors and shareholders executing lock-up agreements

Seth Lederman
Leland Gershell
Bruce Daugherty
Stuart Davidson
Patrick Grace
Donald W. Landry
Ernest Mario
Charles E. Mather IV
John Rhodes
Samuel Saks
Lederman & Co., LLC
Eli Lederman
