

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

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Quarterly Period Ended March 31, 2017

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Transition Period from _____ to _____

Commission file number: 001-36019

TONIX PHARMACEUTICALS HOLDING CORP.
(Exact name of registrant as specified in its charter)

Nevada

(State or other jurisdiction of incorporation or organization)

26-1434750

(I.R.S. Employer Identification No.)

509 Madison Avenue, Suite 306
New York, New York 10022

(Address of principal executive offices) (zip code)

(212) 980-9155

(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

As of May 10, 2017, there were 7,486,026 shares of registrant's common stock outstanding.

TONIX PHARMACEUTICALS HOLDING CORP.

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PART I – FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

**TONIX PHARMACEUTICALS HOLDING CORP.
CONDENSED CONSOLIDATED BALANCE SHEETS
(In Thousands, Except Par Value and Share Amounts)**

	<u>March 31,</u> 2017 (unaudited)	<u>December 31,</u> 2016
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 19,943	\$ 18,941
Marketable securities-available for sale, at fair value	2,480	7,180
Prepaid expenses and other	<u>1,009</u>	<u>1,019</u>
Total current assets	23,432	27,140
Property and equipment, net	132	150
Restricted cash	89	89
Intangible asset	120	120
Security deposits	<u>11</u>	<u>11</u>
Total assets	<u>\$ 23,784</u>	<u>\$ 27,510</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 841	\$ 872
Accrued expenses	<u>939</u>	<u>1,244</u>
Total current liabilities	1,780	2,116
Deferred rent payable	<u>29</u>	<u>33</u>
Total liabilities	1,809	2,149
Commitments (See Note 8)		
Stockholders' equity:		
Preferred stock, \$0.001 par value; 5,000,000 shares authorized, none issued or outstanding	-	-
Common stock, \$0.001 par value; 15,000,000 shares authorized; 4,160,814 and 3,918,147 shares issued and outstanding as of March 31, 2017 and December 31, 2016, respectively, and 2,496 shares to be issued as of December 31, 2016	4	4
Additional paid in capital	168,283	166,604
Accumulated deficit	(146,304)	(141,240)
Accumulated other comprehensive loss	<u>(8)</u>	<u>(7)</u>
Total stockholders' equity	<u>21,975</u>	<u>25,361</u>
Total liabilities and stockholders' equity	<u>\$ 23,784</u>	<u>\$ 27,510</u>

See the accompanying notes to the condensed consolidated financial statements

TONIX PHARMACEUTICALS HOLDING CORP.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(In Thousands, Except Share and Per Share Amounts)
(unaudited)

	Three months ended March 31,	
	2017	2016
COSTS AND EXPENSES:		
Research and development	\$ 2,994	\$ 10,671
General and administrative	2,097	3,343
	5,091	14,014
Operating loss	(5,091)	(14,014)
Interest income, net	27	38
NET LOSS	\$ (5,064)	\$ (13,976)
Net loss per common share, basic and diluted	\$ (1.27)	\$ (7.41)
Weighted average common shares outstanding, basic and diluted	3,985,529	1,886,043

See the accompanying notes to the condensed consolidated financial statements

TONIX PHARMACEUTICALS HOLDING CORP.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(In Thousands)
(unaudited)

	Three months ended March 31,	
	2017	2016
Net loss	\$ (5,064)	\$ (13,976)
Other comprehensive (loss) gain:		
Foreign currency translation (loss) gain	(1)	18
Unrealized gain on available for sale securities	-	25
Total other comprehensive (loss) gain	(1)	43
Comprehensive loss	\$ (5,065)	\$ (13,933)

See the accompanying notes to the condensed consolidated financial statements

TONIX PHARMACEUTICALS HOLDING CORP.
CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
THREE MONTHS ENDED MARCH 31, 2017
(In Thousands, Except Share and Per Share Amounts)
(unaudited)

	Preferred Stock		Common Stock		Additional	Accumulated	Accumulated	Total
	Shares	Amount	Shares	Amount	Paid in Capital	Other Comprehensive Income (Loss)	Deficit	
Balance, December 31, 2016	-	\$ -	3,918,147	\$ 4	\$ 166,604	\$ (7)	\$ (141,240)	\$ 25,361
Employee stock purchase plan	-	-	2,496	-	10	-	-	10
Issuance of common stock related to restricted stock units	-	-	5,625	-	-	-	-	-
Stock-based compensation					567	-	-	567
Issuance of common stock in February (\$5.09 per share) and March (\$4.50 per share), net of transaction expenses of \$34	-	-	234,546	-	1,102	-	-	1,102
Unrealized loss on foreign currency translation	-	-	-	-	-	(1)	-	(1)
Net loss	-	-	-	-	-	-	(5,064)	(5,064)
Balance, March 31, 2017	-	\$ -	4,160,814	\$ 4	\$ 168,283	\$ (8)	\$ (146,304)	\$ 21,975

See the accompanying notes to the condensed consolidated financial statements

TONIX PHARMACEUTICALS HOLDING CORP.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In Thousands)
(unaudited)

	Three months ended March 31,	
	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	\$ (5,064)	\$ (13,976)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	24	57
Stock-based compensation	567	896
Changes in operating assets and liabilities:		
Prepaid expenses	10	178
Accounts payable	(31)	(986)
Accrued expenses	(307)	(1,645)
Deferred rent payable	7	(9)
Net cash used in operating activities	<u>(4,794)</u>	<u>(15,485)</u>
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of furniture and fixtures	-	(65)
Maturities of marketable securities	4,694	4,783
Net cash provided by investing activities	<u>4,694</u>	<u>4,718</u>
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds, net of expenses of \$34 from sale of common stock	1,102	-
Net cash provided by financing activities	<u>1,102</u>	<u>-</u>
Effect of currency rate change on cash	-	19
Net increase (decrease) in cash	1,002	(10,748)
Cash, beginning of the period	<u>18,941</u>	<u>19,175</u>
Cash, end of period	<u>\$ 19,943</u>	<u>\$ 8,427</u>
Supplemental disclosures of cash flow information:		
Non-cash financing activities:		
Issuance of common stock under employee benefit plan	<u>\$ 10</u>	<u>\$ 113</u>

See the accompanying notes to the condensed consolidated financial statements

TONIX PHARMACEUTICALS HOLDING CORP.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
MARCH 31, 2017 AND 2016 (UNAUDITED)

NOTE 1 – BUSINESS

Tonix Pharmaceuticals Holding Corp., through its wholly owned subsidiary Tonix Pharmaceuticals, Inc. (“Tonix Sub”), is a late clinical-stage pharmaceutical company dedicated to the development of innovative pharmaceutical products to address public health challenges. All drug product candidates are still in development.

The consolidated financial statements include the accounts of Tonix Pharmaceuticals Holding Corp. and its wholly owned subsidiaries, Tonix Sub, Krele LLC, Tonix Pharmaceuticals (Canada), Inc., Tonix Medicines, Inc., Tonix Pharma Holdings Limited and Tonix Pharma Limited (collectively hereafter referred to as the “Company” or “Tonix”).

NOTE 2 – SIGNIFICANT ACCOUNTING POLICIES

Interim financial statements

The unaudited condensed consolidated interim financial statements of the Company have been prepared in accordance with accounting principles generally accepted in the United States (“GAAP”) for interim financial information and the instructions to Form 10-Q and Article 8 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by GAAP for complete financial statements. In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary for a fair presentation have been included.

The condensed consolidated balance sheet as of December 31, 2016 contained herein has been derived from audited financial statements.

Operating results for the three months ended March 31, 2017 are not necessarily indicative of results that may be expected for the year ending December 31, 2017. These condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto for the year ended December 31, 2016 included in the Company’s Annual Report on Form 10-K, filed with the Securities and Exchange Commission (“SEC”) on April 13, 2017.

Recent accounting pronouncements

In February 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2016-02, Leases (Topic 842). Under the new guidance, lessees will be required to recognize the following for all leases (with the exception of short-term leases) at the commencement date: a lease liability, which is a lessee’s obligation to make lease payments arising from a lease, measured on a discounted basis; and a right-of-use asset, which is an asset that represents the lessee’s right to use, or control the use of, a specified asset for the lease term. Public business entities should apply the amendments in ASU 2016-02 for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early application is permitted. Lessees (for capital and operating leases) must apply a modified retrospective transition approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. The modified retrospective approach would not require any transition accounting for leases that expired before the earliest comparative period presented. Lessees may not apply a full retrospective transition approach. The Company is currently evaluating the impact of adopting this guidance.

Risks and uncertainties

The Company's primary efforts are devoted to conducting research and development of innovative pharmaceutical products to address public health challenges. The Company has experienced net losses and negative cash flows from operations since inception and expects these conditions to continue for the foreseeable future. Further, the Company does not have any commercial products available for sale and has not generated revenues and there is no assurance that if its products are approved for sale, that the Company will be able to generate cash flow to fund operations. In addition, there can be no assurance that the Company's research and development will be successfully completed or that any product will be approved or commercially viable.

At March 31, 2017, the Company had working capital of approximately \$21.7 million, after raising approximately \$1.1 million, net of expenses, through the at-the-market (“ATM”) offering during the quarter ended March 31, 2017.

At March 31, 2017, the Company had cash and marketable securities of approximately \$22.4 million, which together with approximately \$16.3 million of net proceeds from the sales of common stock subsequent to March 31, 2017 (see Note 9), constitutes sufficient funds for the Company to meet its research and development and other funding requirements for at least the next 12 months.

TONIX PHARMACEUTICALS HOLDING CORP.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
MARCH 31, 2017 AND 2016 (UNAUDITED)

Use of estimates

The preparation of financial statements in accordance with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, and the reported amounts of expenses during the reporting period. Actual results could differ from those estimates. Significant estimates include the useful life of fixed assets, assumptions used in the fair value of stock-based compensation and other equity instruments, and the percent of completion of research and development contracts.

Cash equivalents

The Company considers cash equivalents to be those investments which are highly liquid, readily convertible to cash and have an original maturity of three months or less when purchased. At March 31, 2017 and December 31, 2016, cash equivalents, which consisted of money market funds, amounted to \$14.7 million and \$10.0 million, respectively.

Marketable securities

Marketable securities consist primarily of certificates of deposit, U.S. agency, and U.S. treasury bonds with maturities greater than three months and up to two years at the time of purchase. These securities, which are classified as available for sale, are carried at fair value, with unrealized gains and losses, net of any tax effect, reported in stockholders' equity as accumulated other comprehensive (loss) income. As investments are available for current operations, they are classified as current irrespective of their maturities. Amortization of premiums is included in interest income. For the quarters ended March 31, 2017 and 2016, the amortization of bond premiums totaled \$6,000 and \$24,000, respectively. As of March 31, 2017, amortized cost basis of the securities approximated their fair value. The values of these securities may fluctuate as a result of changes in market interest rates and credit risk. Marketable securities with a principal balance aggregating \$4.7 million matured during the quarter ended March 31, 2017.

The schedule of maturities at March 31, 2017 and December 31, 2016 is as follows (in thousands):

	1 Year or Less	
	March 31, 2017	December 31, 2016
U.S. treasury bonds	\$ 1,500	\$ 2,752
U.S. agency bonds	-	1,254
Certificates of deposit	980	3,174
Total	<u>\$ 2,480</u>	<u>\$ 7,180</u>

Property and equipment

Property and equipment are stated at cost, less accumulated depreciation. Depreciation is calculated using the straight-line method over the asset's estimated useful life, which is three years for computer assets, five years for furniture and all other equipment and term of lease for leasehold improvements. Expenditures for maintenance and repairs are expensed as incurred. Depreciation and amortization expense for the quarters ended March 31, 2017 and 2016 was \$18,000 and \$33,000, respectively. All property and equipment is located in the United States.

Intangible asset with indefinite lives

Prior to January 1, 2017, the Company purchased certain internet domain rights, which were determined to have an indefinite life. Identifiable intangibles with indefinite lives are not amortized but are reviewed for impairment annually or whenever events or changes in circumstances indicate that its carrying amount may be less than fair value. As of March 31, 2017, the Company believed that no impairment existed.

TONIX PHARMACEUTICALS HOLDING CORP.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
MARCH 31, 2017 AND 2016 (UNAUDITED)

Research and development costs

The Company outsources certain of its research and development efforts and expenses these costs as incurred, including the cost of manufacturing products for testing, as well as licensing fees and costs associated with planning and conducting clinical trials. The value ascribed to patents and other intellectual property acquired has been expensed as research and development costs, as such property related to particular research and development projects and had no alternative future uses.

The Company estimates its expenses resulting from its obligations under contracts with vendors, clinical research organizations and consultants and under clinical site agreements in connection with conducting clinical trials. The financial terms of these contracts are subject to negotiations, which vary from contract to contract and may result in payment flows that do not match the periods over which materials or services are provided under such contracts. The Company accounts for trial expenses according to the timing of various aspects of the trial. The Company determines accrual estimates taking into account discussion with applicable personnel and outside service providers as to the progress or state of consummation of trials, or the services completed.

During the course of a clinical trial, the Company adjusts its clinical expense recognition if actual results differ from its estimates. The Company makes estimates of its accrued expenses as of each balance sheet date based on the facts and circumstances known to it at that time. The Company's clinical trial accruals are dependent upon the timely and accurate reporting of contract research organizations and other third-party vendors.

Stock-based compensation

All stock-based payments to employees and to nonemployee directors for their services as directors, including grants of restricted stock units ("RSUs"), and stock options, are measured at fair value on the grant date and recognized in the condensed consolidated statements of operations as compensation or other expense over the relevant service period.

Stock-based payments to nonemployees are recognized as an expense over the period of performance. Such payments are measured at fair value at the earlier of the date a performance commitment is reached or the date performance is completed. In addition, for awards that vest immediately and are non-forfeitable, the measurement date is the date the award is issued.

Foreign currency translation

Operations of the Canadian subsidiary are conducted in local currency which represents its functional currency. The U.S. dollar is the functional currency of the other foreign subsidiaries. Balance sheet accounts of the Canadian subsidiary were translated from foreign currency into U.S. dollars at the exchange rate in effect at the balance sheet date and income statement accounts were translated at the average rate of exchange prevailing during the period. Translation adjustments resulting from this process were included in accumulated other comprehensive income (loss) on the condensed consolidated balance sheets.

Comprehensive income (loss)

Comprehensive income (loss) is defined as the change in equity of a business during a period from transactions and other events and circumstances from non-owners sources. It includes all changes in equity during a period except those resulting from investments by owners and distributions to owners. Other comprehensive income (loss) represents foreign currency translation adjustments and unrealized gains or losses from available for sale securities.

The following table summarizes the changes in accumulated other comprehensive income by component:

	Foreign Currency Translation Adjustment	Unrealized Gains (Losses) on available for sale securities	Total
Balance at December 31, 2016	(7)	-	(7)
Other Comprehensive Loss	(1)	-	(1)
Balance at March 31, 2017	(8)	-	(8)

TONIX PHARMACEUTICALS HOLDING CORP.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
MARCH 31, 2017 AND 2016 (UNAUDITED)

Income taxes

Deferred income tax assets and liabilities are determined based on the estimated future tax effects of net operating loss and credit carryforwards and temporary differences between the tax basis of assets and liabilities and their respective financial reporting amounts measured at the current enacted tax rates. The Company records an estimated valuation allowance on its deferred income tax assets if it is not more likely than not that these deferred income tax assets will be realized.

The Company recognizes a tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position. The tax benefits recognized in the consolidated financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. As of March 31, 2017, the Company has not recorded any unrecognized tax benefits.

Per share data

Basic and diluted net loss per common share is calculated by dividing net loss, by the weighted average number of outstanding shares of common stock, adjusted to give effect to the 1-for-10 reverse stock split, which was effected on March 17, 2017 (see Note 4).

As of March 31, 2017 and 2016, there were outstanding warrants to purchase an aggregate of 733,444 and 172,922 shares, respectively, of the Company's common stock. In addition, the Company has issued to employees, directors and consultants, options to acquire shares of the Company's common stock, of which 307,426 and 223,996 were outstanding at March 31, 2017 and 2016, respectively, and restricted stock units issued to non-employee directors to acquire shares of the Company's common stock of which 5,625 were outstanding at each of March 31, 2017 and 2016 (see Note 6). In computing diluted net loss per share for the three months ended March 31, 2017 and 2016, no effect has been given to such options, warrants and restricted stock units as their effect would be anti-dilutive.

NOTE 3 – FAIR VALUE MEASUREMENTS

Fair value measurements affect the Company's accounting for certain of its financial assets. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date and is measured according to a hierarchy that includes:

- Level 1: Observable inputs, such as quoted prices in active markets.
- Level 2: Inputs, other than quoted prices in active markets, that are observable either directly or indirectly. Level 2 assets and liabilities include debt securities with quoted market prices that are traded less frequently than exchange-traded instruments. This category includes U.S. government agency-backed debt securities and corporate-debt securities.
- Level 3: Unobservable inputs in which there is little or no market data.

The following table summarizes the Company's financial assets measured at fair value on a recurring basis as of March 31, 2017 and December 31, 2016 (in thousands):

Description	March 31, 2017	Quoted Prices in Active Markets (Level 1)
Assets:		
Cash equivalents	\$ 14,749	\$ 14,749
Marketable securities – available for sale	2,480	2,480
Total assets	\$ 17,229	\$ 17,229

TONIX PHARMACEUTICALS HOLDING CORP.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
MARCH 31, 2017 AND 2016 (UNAUDITED)

Description	December 31, 2016	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)
Assets:			
Cash equivalents	\$ 10,006	\$ 10,006	\$ —
Marketable securities – available for sale	7,180	5,926	1,254
Total assets	\$ 17,186	\$ 15,932	\$ 1,254

NOTE 4 – STOCKHOLDERS' EQUITY

On March 13, 2017, the Company filed a Certificate of Change with the Nevada Secretary of State, which was effective March 17, 2017. Pursuant to the Certificate of Change, the Company effected a 1-for-10 reverse stock split of its issued and outstanding shares of common stock, \$0.001 par value, whereby 41,010,720 outstanding shares of the Company's common stock were exchanged for 4,101,072 shares of the Company's common stock. In connection with the reverse stock split, the Company issued an additional 1,034 shares of the Company's common stock due to rounding. Furthermore, pursuant to the Certificate of Change, the number of authorized shares of common stock was reduced from 150 million to 15 million. All per share amounts and number of shares in the condensed consolidated financial statements and related notes have been retroactively restated to reflect the reverse stock split.

NOTE 5 – SALE OF COMMON STOCK

On April 28, 2016, the Company entered into a sales agreement ("Sales Agreement") with Cowen and Company, LLC ("Cowen"), as sales agent, pursuant to which the Company may, from time to time, issue and sell common stock with an aggregate value of up to \$15.0 million in ATM sales. On the same day, the Company filed a prospectus supplement under its existing shelf registration relating to the Sales Agreement. Cowen is acting as sole sales agent for any sales made under the Sales Agreement for a 3% commission on gross proceeds. The Company's common stock will be sold at prevailing market prices at the time of the sale, and, as a result, prices may vary. Unless otherwise terminated earlier, the Sales Agreement continues until all shares available under the Sales Agreement have been sold. During the quarter ended March 31, 2017, the Company sold an aggregate of 234,546 shares of common stock using the ATM, resulting in net proceeds of \$1.1 million, net of expenses of approximately \$34,000 of Cowen's commission.

NOTE 6 – STOCK-BASED COMPENSATION

2012 incentive stock option plan

In April 2012, the Company's stockholders approved the 2012 Incentive Stock Option Plan as subsequently amended (the "2012 Plan"). The 2012 Plan provides for the issuance of options to purchase up to 55,000 shares of the Company's common stock to officers, directors, employees and consultants of the Company. With the adoption of the 2016 Plan (as defined below), no further grants may be made under the 2012 Plan.

2014 incentive stock plan

On June 9, 2014, the Company's stockholders approved the Tonix Pharmaceuticals Holding Corp. 2014 Stock Incentive Plan (the "2014 Plan" and together with the 2012 Plan, the "Prior Plans").

Under the terms of the 2014 Plan, the Company may issue (1) stock options (incentive and nonstatutory), (2) restricted stock, (3) stock appreciation rights ("SARs"), (4) RSUs, (5) other stock-based awards, and (6) cash-based awards. The 2014 Plan provides for the issuance of up to 180,000 shares of common stock. With the adoption of the 2016 Plan, no further grants may be made under the 2014 Plan.

TONIX PHARMACEUTICALS HOLDING CORP.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
MARCH 31, 2017 AND 2016 (UNAUDITED)

2016 stock incentive plan

On May 11, 2016, the Company's stockholders approved the Tonix Pharmaceuticals Holding Corp. 2016 Stock Incentive Plan (the "2016 Plan" and together with the Prior Plans, the "Plans"). As a result of adoption of the 2016 Plan by the stockholders, no further grants may be made under the Prior Plans.

Under the terms of the 2016 Plan, the Company may issue (1) stock options (incentive and nonstatutory), (2) restricted stock, (3) SARs, (4) RSUs, (5) other stock-based awards, and (6) cash-based awards. The 2016 Plan provides for the issuance of up to 278,500 shares of common stock, which amount will be (a) reduced by awards granted under the 2014 Plan after December 31, 2015, and (b) increased to the extent that awards granted under the Plans are forfeited, expire or are settled for cash (except as otherwise provided in the 2016 Plan). In terms of calculating how many shares are reduced or increased based on activity under the Prior Plans after December 31, 2015, the calculation shall be based on one share for every one share that was subject to an option or SAR and 1.25 shares for every one share that was subject to an award other than an option or SAR. With respect to awards intended to qualify as performance-based compensation under Section 162(m) of the Code, the 2016 Plan provides that, subject to adjustment as provided in the plan, no participant may, in any 12-month period (i) be granted options or SARs with respect to more than 75,000 shares of the Company's common stock, (ii) earn more than 50,000 shares of the Company's common stock under restricted stock awards, restricted stock unit awards, performance awards and/or other share-based awards, or (iii) earn more than \$5,000,000 under an award; provided, however, that each of these limitations shall be multiplied by two (2) with respect to awards granted to a participant during the first calendar year in which the participant commences employment with the Company or any of its subsidiaries. The Board of Directors determines the exercise price, vesting and expiration period of the grants under the 2016 Plan. However, the exercise price of an incentive stock option may not be less than 110% of fair value of the common stock at the date of the grant for a 10% or more shareholder and 100% of fair value for a grantee who is not a 10% shareholder. The fair value of the common stock is determined based on quoted market price or in absence of such quoted market price, by the Board of Directors in good faith. Additionally, the vesting period of the grants under the 2016 Plan may not be more than five years and expiration period not more than ten years. The Company reserved 278,500 shares of its common stock for future issuance under the terms of the 2016 Plan. As of March 31, 2017, 122,596 shares were available for future grants under the 2016 Plan.

General

A summary of the stock option activity and related information for the Plans for the three months ended March 31, 2017 is as follows:

	<u>Shares</u>	<u>Weighted- Average Exercise Price</u>	<u>Weighted- Average Remaining Contractual Term</u>
Outstanding at January 1, 2017	217,426	\$ 91.33	
Grants	90,000	\$ 5.50	
Exercised	-		
Forfeitures or expirations	-	\$ -	
Outstanding at March 31, 2017	307,426	\$ 66.21	8.26
Vested and expected to vest at March 31, 2017	307,426	\$ 66.21	8.26
Exercisable at March 31, 2017	150,506	\$ 108.95	7.11

The aggregate intrinsic value in the preceding table represents the total pretax intrinsic value, based on options with an exercise price less than the Company's closing stock price at the respective dates.

The Company measures the fair value of stock options on the date of grant, based on a Binomial option pricing model using certain assumptions discussed below, and the closing market price of the Company's common stock on the date of the grant. For employees and directors, the fair value of the award is measured on the grant date and for non-employees, the fair value of the award is generally re-measured on vesting dates and interim financial reporting dates until the service period is complete. Most stock options granted pursuant to the Plans typically vest 1/3rd 12 months from the date of grant and 1/36th each month thereafter for 24 months and expire ten years from the date of grant. In addition, the Company also issues performance-based options to executive officers, which options vest when the target parameters are met, subject to a one year minimum service period prior to vesting. Stock-based compensation expense related to awards is amortized over the applicable vesting period using the straight-line method.

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On March 1, 2017, the Company granted options to purchase an aggregate of 61,750 shares of the Company's common stock to employees with an exercise price of \$5.50, exercisable for a period of ten years and a grant date fair value of \$3.36, vesting 1/3 on the first anniversary and 1/36th each month thereafter for 24 months. Additionally, the Company granted options to purchase 28,250 shares of the Company's common stock to employees with an exercise price of \$5.50, exercisable for a period of ten years, and vesting 50% upon achieving enrollment of 250 participants in the ongoing HONOR study by December 31, 2017, and the remaining 50% vesting 1% for each participant that is enrolled in the HONOR study by December 31, 2017 in excess of 250, subject to a one year minimum service period prior to vesting.

On February 9, 2016, 40,300 options were granted to employees with an exercise price of \$50.30, a 10 year life and grant date fair value of \$24.91 per share. Additionally, the Company granted options to purchase 20,000 shares of the Company's common stock to employees with an exercise price of \$50.30, exercisable for a period of ten years, vesting 1/3 each upon the Company's common stock having an average closing sale price equal to or exceeding each of \$60.00, \$70.00 and \$80.00 per share for 20 consecutive trading days, subject to a one year minimum service period prior to vesting.

On March 31, 2016, 108, 541 and 1,320 options with exercise prices of \$98.70, \$66.80 and \$59.50, respectively, were forfeited.

The assumptions used in the valuation of stock options granted during the three months ended March 31, 2017 and 2016 were as follows:

	Three Months Ended March 31, 2017	Three Months Ended March 31, 2016
Risk-free interest rate	1.99% to 2.29%	0.85% to 1.86%
Expected term of option	5.00 to 7.91 years	6.00 to 9.06 years
Expected stock price volatility	76.61% to 76.77%	76.41% to 81.59%
Expected dividend yield	\$ 0.0	\$ 0.0

The risk-free interest rate is based on the yield of Daily U.S. Treasury Yield Curve Rates with terms equal to the expected term of the options as of the grant date. The expected term of options is determined using the simplified method, as provided in an SEC Staff Accounting Bulletin, and the expected stock price volatility is based on comparable companies' historical stock price volatility since the Company does not have sufficient historical exercise or volatility data because its equity shares have been publicly traded for only a limited period of time.

Stock-based compensation expense relating to options granted of \$0.5 million and \$0.8 million was recognized for the three month periods ended March 31, 2017 and 2016, respectively.

As of March 31, 2017, the Company had approximately \$1.6 million of total unrecognized compensation cost related to non-vested awards granted under the Plans, which the Company expects to recognize over a weighted average period of 1.39 years.

2014 employee stock purchase plan

On June 9, 2014, the Company's stockholders approved the Tonix Pharmaceuticals Holdings Corp. 2014 Employee Stock Purchase Plan (the "2014 ESPP"). The 2014 ESPP allows eligible employees to purchase up to an aggregate of 30,000 shares of the Company's common stock. Under the 2014 ESPP, on the first day of each offering period, each eligible employee for that offering period has the option to enroll for that offering period, which allows the eligible employees to purchase shares of the Company's common stock at the end of the offering period. Each offering period under the 2014 ESPP is for six months, which can be modified from time-to-time. Subject to limitations, each participant will be permitted to purchase a number of shares determined by dividing the employee's accumulated payroll deductions for the offering period by the applicable purchase price, which is equal to 85 percent of the fair market value of our common stock at the beginning or end of each offering period, whichever is less. A participant must designate in his or her enrollment package the percentage (if any) of compensation to be deducted during that offering period for the purchase of stock under the 2014 ESPP, subject to the statutory limit under the Code. As of March 31, 2017, there were 19,449 shares available for future issuance under the 2014 ESPP.

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The 2014 ESPP is considered a compensatory plan with the related compensation cost written off over the six month offering period. The compensation expense related to the 2014 ESPP for the quarters ended March 31, 2017 and 2016 was \$36,000 and \$59,000, respectively. As of March 31, 2017, approximately \$42,000 of employee payroll deductions, which had been withheld since January 1, 2017, the commencement of the offering period ending June 30, 2017, are included in accrued expenses in the accompanying balance sheet. In January 2017, 2,496 shares that were purchased as of December 31, 2016, were issued under the 2014 ESPP, and approximately \$10,000 of employee payroll deductions accumulated at December 31, 2016, related to acquiring such shares, was transferred from accrued expenses to additional paid in capital.

Restricted stock units

In February 2017, 5,625 RSUs that were granted to our non-employee directors for board services in 2016, in lieu of cash, with a one year vesting from the grant date and a fair value of \$38.10 at the date of grant vested, and 5,625 shares of the Company's common stock were issued during the three months ended March 31, 2017.

The following table summarizes the restricted stock activity for the three months ended March 31, 2017:

Restricted stock units as of January 1, 2017	11,250
Granted	-
Forfeited	-
Vested	(5,625)
Unvested restricted stock units as of March 31, 2017	<u>5,625</u>

Stock-based compensation expense related to RSU grants was \$50,000 and \$79,000 for the three months ended March 31, 2017 and 2016, respectively. As of March 31, 2017, the stock-based compensation relating to RSU's of \$21,000 remains unamortized and is expected to be amortized over the remaining period of two months.

NOTE 7 – STOCK WARRANTS

The following table summarizes information with respect to outstanding warrants to purchase common stock of the Company at March 31, 2017:

Exercise Price	Number Outstanding	Expiration Date
\$ 6.30	546,250	October 2021
\$ 6.90	47,361	October 2021
\$ 42.50	91,898	August 2018
\$ 120.00	45,601	December 2017 to February 2018
\$ 250.00	2,334	January 2019 to February 2019
	<u>733,444</u>	

During the quarter ended March 31, 2017, 33,089 warrants with an exercise price of \$250.00 expired.

NOTE 8 – COMMITMENTS

Research and development contracts

The Company has entered into contracts with various contract research organizations with outstanding commitments aggregating approximately \$6.1 million at March 31, 2017 for future work to be performed.

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Operating leases

As of March 31, 2017, future minimum lease payments under operating leases for office space were as follows (in thousands):

Year Ending December 31,	
2017	\$ 387
2018	459
2019	181
	<u>\$ 1,027</u>

Defined contribution plan

Approved by the Company's Board of Directors on March 3, 2014, effective April 1, 2014, the Company established a qualified defined contribution plan (the "401(k) Plan") pursuant to Section 401(k) of the Code, whereby all eligible employees may participate. Participants may elect to defer a percentage of their annual pretax compensation to the 401(k) Plan, subject to defined limitations. The Company is required to make contributions to the 401(k) Plan equal to 100 percent of each participant's pretax contributions of up to three percent of his or her eligible compensation, and the Company is also required to make a contribution equal to three percent of each participant's salary, on an annual basis, subject to limitations under the Code. For the three months ended March 31, 2017 and 2016, the Company charged operations \$16,000 and \$133,000, respectively, for contributions under the 401(k) Plan.

NOTE 9 – SUBSEQUENT EVENTS

April 2017 financing

On March 30, 2017, the Company entered into an underwriting agreement with Aegis Capital Corp., as representative of the several underwriters (collectively, the "2017 Underwriters"), relating to the issuance and sale of 1,800,000 shares of the Company's common stock, in an underwritten public offering (the "April 2017 Financing"). The public offering price for each share of common stock was \$4.45. The Company granted the 2017 Underwriters an option to purchase up to an additional 270,000 shares of common stock to cover over-allotments, if any.

The April 2017 Financing closed on April 4, 2017. The 2017 Underwriters purchased the shares at a seven percent discount to the public offering price, for an aggregate discount of \$0.6 million (or \$0.31 per share). The Company also expects to incur offering expenses of approximately \$0.2 million. The Company expects to receive net proceeds of approximately \$7.2 million. On April 13, 2017, the 2017 Underwriters fully exercised the over-allotment option and purchased 270,000 shares of common stock for net proceeds of approximately \$1.1 million, net of an aggregate discount of \$0.1 million (or \$0.31 per share).

At-the-market offering

In April 2017, the Company sold an aggregate of 1,251,928 shares of common stock using the ATM, resulting in net proceeds of \$8.0 million, net of expenses, which included Cowen's commission of approximately \$0.2 million. With these sales, the Company has sold all \$15 million of shares under the Sales Agreement, and the Sales Agreement has been terminated.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Management's Discussion and Analysis of Financial Condition and Results of Operations includes a number of forward-looking statements that reflect Management's current views with respect to future events and financial performance. You can identify these statements by forward-looking words such as "may," "will," "expect," "anticipate," "believe," "estimate" and "continue," or similar words. Those statements include statements regarding the intent, belief or current expectations of us and members of its management team as well as the assumptions on which such statements are based. Prospective investors are cautioned that any such forward-looking statements are not guarantees of future performance and involve risk and uncertainties, and that actual results may differ materially from those contemplated by such forward-looking statements.

Readers are urged to carefully review and consider the various disclosures made by us in this report and in our other reports filed with the Securities and Exchange Commission. Important factors known to us could cause actual results to differ materially from those in forward-looking statements. We undertake no obligation to update or revise forward-looking statements to reflect changed assumptions, the occurrence of unanticipated events or changes in the future operating results over time. We believe that its assumptions are based upon reasonable data derived from and known about our business and operations. No assurances are made that actual results of operations or the results of our future activities will not differ materially from its assumptions. Factors that could cause differences include, but are not limited to: substantial competition; our possible need for additional financing; uncertainties of patent protection and litigation; uncertainties of government or third party payor reimbursement; limited research and development efforts and dependence upon third parties; and risks related to failure to obtain clearances or approvals from the United States Food and Drug Administration, or FDA, and noncompliance with FDA regulations.

Business Overview

We are a late clinical-stage pharmaceutical company dedicated to the development of innovative pharmaceutical products to address public health challenges. Our most advanced drug development program is focused on delivering an efficacious and safe long-term treatment of posttraumatic stress disorder, or PTSD. PTSD is characterized by chronic disability, inadequate treatment options, high utilization of healthcare services, and significant economic burden. We have assembled a management team with significant industry experience to lead the development of our product candidates. We complement our management team with a network of scientific, clinical, and regulatory advisors that includes recognized experts in the fields of PTSD and other central nervous system disorders.

Our lead product candidate, TNX-102 SL, a patented low-dose cyclobenzaprine sublingual tablet, designed for bedtime administration, is in Phase 3 clinical development as a potential treatment for PTSD. The FDA has designated TNX-102 SL a Breakthrough Therapy for the treatment of PTSD. TNX-102 SL is an investigational new drug and has not been approved for any indication.

Our therapeutic strategy in PTSD is supported by results from a randomized, double-blind, placebo-controlled, 12-week Phase 2 study of TNX-102 SL in participants with military-related PTSD, which we refer to as the AtEase study. We reported topline results from the AtEase study in May 2016. In the AtEase study, participants were randomized in a 2:1:2 ratio to TNX-102 SL 2.8 mg, TNX-102 SL 5.6 mg, or placebo sublingual tablets at bedtime daily for 12 weeks. This study was conducted at 24 U.S. centers and enrolled 231 participants in the modified intent-to-treat population. The primary objective of the AtEase study was to evaluate the efficacy and safety of TNX-102 SL in the treatment of military-related PTSD. The primary efficacy endpoint was the 12-week mean change from baseline in the severity of PTSD symptoms as measured by the Clinician-Administered PTSD Scale for the Diagnostic and Statistical Manual-5, or CAPS-5, between those treated with TNX-102 SL and those receiving placebo. The CAPS-5 scale is a standardized structured clinician interview and is considered the gold standard in clinical research and regulatory approval for measuring the symptom severity of PTSD.

AtEase was adequately designed to evaluate whether a 2.8 mg dose would be efficacious, which would have provided an opportunity for this study to be used as one of the two pivotal efficacy studies required to support approval of TNX-102 SL for the treatment of PTSD. Although the 2.8 mg dose trended in the direction of a therapeutic effect, it did not reach statistical significance on the primary endpoint. The 5.6 mg dose had a therapeutic effect as assessed by the CAPS-5 scale, which was statistically significant by Mixed-effect Model Repeated Measures with Multiple Imputation analysis (p-value = 0.031), even though this arm of the study, by design, included only approximately half the number of participants of the 2.8 mg and placebo arms. TNX-102 SL 5.6 mg demonstrated a dose-effect on multiple efficacy and safety measurements in the AtEase study.

In the AtEase study, TNX-102 SL was well tolerated and the participant retention rate was 73% on placebo, 79% on TNX-102 SL 2.8 mg and 84% on TNX-102 SL 5.6 mg. Four distinct serious adverse events were reported in the study; three were in the placebo group, and one (proctitis/peri-rectal abscess,) in the TNX-102 SL arm, which was determined to be unrelated to TNX-102 SL. The most common non-dose related adverse events were mild and transient local administration site conditions and of these oral hypoesthesia, or numbness, was the most frequent and occurred in 39% of participants treated with the 2.8 mg dose and 36% of the participants treated with the 5.6 mg dose, compared to 2% of the participants receiving placebo. Oral paresthesia, or tingling, occurred in 16% of participants treated with the 2.8 mg dose and 4% of participants treated with the 5.6 mg dose, compared to 3% of the participants receiving placebo. Glossodynia, or a burning or stinging sensation in the mouth, occurred in 3% of participants treated with the 2.8 mg dose and 6% of participants treated with the 5.6 mg dose, compared to 1% of participants receiving placebo.

Systemic adverse events that were potentially dose-related and occurred in greater than or equal to 5% of participants treated with the 5.6 mg dose or placebo included: somnolence in 16% versus 6% of the participants receiving placebo; dry mouth in 16% versus 11% of the participants receiving placebo; headache in 12% versus 4% of the participants receiving placebo; insomnia in 6% versus 9% of the participants receiving placebo; sedation in 12% versus 1% of the participants receiving placebo; upper respiratory tract infection in 4% versus 5% of the participants receiving placebo; abnormal dreams in 2% versus 5% of the participants receiving placebo; and weight increase in 2% versus 5% of the participants receiving placebo. For the participants treated with the 2.8 mg dose, the incidence of the most common systemic adverse events reported above were less frequent than participants treated with the 5.6 mg dose with the exception of insomnia, which was 8%.

On December 16, 2016, the FDA designated TNX-102 SL a Breakthrough Therapy for the treatment of PTSD based on data derived from a population with military-related PTSD in the AtEase study.

We commenced a randomized, double-blind placebo-controlled Phase 3 study of TNX-102 SL in approximately 550 participants with military-related PTSD in the first quarter of 2017. This first Phase 3 study, the “HONOR study,” is an adaptive design study based on the results of the Phase 2 AtEase study. The study design is very similar to the Phase 2 AtEase study, except there will be one planned interim analysis and the involvement of an independent data monitoring committee, or IDMC, to review unblinded interim analysis results. The IDMC will make a recommendation to continue as planned, to continue but increase the number of recruited participants or to stop for success. In addition, there will be one active dose (5.6 mg administered as 2 x 2.8 mg tablets) and the entrance criterion is CAPS-5 \geq 33 in this Phase 3 study. The interim analysis will be conducted when approximately 50% of the initially planned participants (approximately 275 participants) are randomized. We received FDA clearance of the first Phase 3 study design in January 2017. The HONOR study involves approximately 35 U.S. centers. As in the case of the AtEase study, the primary efficacy endpoint of the HONOR study is the 12-week mean change from baseline in the severity of PTSD symptoms as measured by the CAPS-5 scale between those treated with TNX-102 SL 5.6 mg and those receiving placebo.

At the Initial Cross-disciplinary Breakthrough meeting on March 9, 2017, the FDA confirmed that a single-study new drug application approval is possible if the topline data of the Phase 3 HONOR study is statistically persuasive.

On May 2, 2017, we were issued U.S. patent 9,636,408 “Eutectic Formulations of Cyclobenzaprine Hydrochloride and Amitriptyline Hydrochloride”, which includes compositions of cyclobenzaprine HCl and methods of manufacturing the eutectic. The Protectic™ protective eutectic and Angstro-Technology™ formulation claimed in the patent are important elements of our proprietary TNX-102 SL composition. The patent is expected to provide us with U.S. market exclusivity until 2034.

We also have a pipeline of other drug and biologic candidates, including two pre-IND (Investigational New Drug) candidates, TNX-601 (tianeptine oxalate) for PTSD and TNX-801, a potential smallpox-preventing vaccine, an IND candidate, TNX-301, a potential treatment for alcohol use disorders, or AUD, and TNX-701, a biodefense development program for protection from radiation injury. We hold worldwide development and commercialization rights to all of our product candidates.

TNX-601 is a novel oral formulation of tianeptine oxalate in the pre-IND stage of development for the treatment for PTSD. We have discovered a novel salt and polymorph, which we believe may provide improved stability, consistency, and manufacturability relative to the known forms of tianeptine. Leveraging our development expertise in PTSD, TNX-601 is being developed for daytime dosing as a first-line monotherapy for PTSD for daytime dosing. Tianeptine’s reported pro-cognitive and anxiolytic effects as well as its ability to attenuate the neuropathological effects of excessive stress responses suggest that it may be used to treat PTSD by a different mechanism of action than TNX-102 SL. On April 19, 2016, we were issued U.S. patent 9,314,469 B2 “Method for treating neurocognitive dysfunction” which includes using tianeptine for cognitive dysfunction associated with corticosteroid use. We intend to develop TNX-601 under Section 505(b)(1) of the Federal Food, Drug, and Cosmetic Act, or FDCA, as a potential treatment for PTSD and cognitive dysfunction associated with corticosteroid use. Pharmaceutical development work on TNX-601 has been initiated.

TNX-801 is a novel potential smallpox-preventing vaccine based on a live synthetic version of horsepox virus, or HPXV, grown in cell culture. Professor David Evans and Dr. Ryan Noyce at the University of Alberta, Canada in collaboration with us, synthesized the HPVX, which demonstrated protective vaccine activity in mice, using a model of lethal vaccinia infection. We are developing TNX-801 as a potential smallpox-preventing vaccine for widespread immunization and for the U.S. strategic national stockpile. Though it shares structural characteristics with vaccinia-based vaccines, TNX-801 has unique virulence properties that we believe may suggest lower toxicity and potential safety advantages over existing vaccinia-based vaccines, which have been associated with adverse side effects such as myopericarditis. We intend to develop TNX-801 under 21 CFR 601 Subpart H, pursuant to which the FDA may grant marketing approval for a biological product for which safety has been established in humans and for which the requirements for efficacy are met based on adequate and well-controlled animal studies, where human studies are not ethical or feasible. This approval pathway has been described as the “Animal Rule”. In the 1970s, vaccination against smallpox was discontinued in the U.S.; however, smallpox remains a material threat to national security. We recently filed a patent on the novel virus vaccine. In addition, 12 years of non-patent based exclusivity is provided under the Patient Protection and Affordable Care Act. It is unknown if a replacement bill will contain the 12-year exclusivity provision. Following the recent passage of the 21st Century Cures Act, we believe TNX-801 qualifies as a medical countermeasure, and therefore should be eligible for a Priority Review Voucher upon FDA approval. We are currently working to develop a vaccine that meets current Good Manufacturing Practice quality to support an IND.

TNX-301 is a fixed-dose combination drug product, or CDP, containing two FDA-approved drugs, disulfiram and selegiline. We intend to develop TNX-301 CDP under Section 505(b)(2) of the FDCA as a potential treatment for AUD, and we have commenced development work on TNX-301 formulations. A pre-IND meeting was held in February 2016 to discuss the clinical development program of TNX-301 for AUD. At that meeting, the FDA advised us the nonclinical studies required for this CDP IND application to support the initiation of the first-in-man study with TNX-301. IND planning activities are underway.

In addition, we own rights to intellectual property on a biodefense technology relating to the development of protective agents against radiation exposure, which we refer to as TNX-701. We have begun nonclinical research and development on TNX-701. Similar to the regulatory pathway intended for TNX-801, we plan to develop TNX-701 under 21 CFR 601 Subpart H, or the “Animal Rule”. We expect significant reduction in development costs and risks compared to the development of other new chemical entities or new biologic candidates.

Current Operating Trends

Our current research and development efforts are focused on developing TNX-102 SL for PTSD, but we also expend increasing effort on our other pipeline programs, including TNX-601, TNX-801 and TNX-301. Our research and development expenses consist of manufacturing work and the cost of drug ingredients used in such work, fees paid to consultants for work related to clinical trial design and regulatory activities, fees paid to providers for conducting various clinical studies as well as for the analysis of the results of such studies, and for other medical research addressing the potential efficacy and safety of our drugs. We believe that significant investment in product development is a competitive necessity, and we plan to continue these investments in order to be in a position to realize the potential of our product candidates and proprietary technologies.

We expect that all of our research and development expenses in the near-term future will be incurred in support of our current and future preclinical and clinical development programs rather than technology development. These expenditures are subject to numerous uncertainties relating to timing and cost to completion. We test compounds in numerous preclinical studies for safety, toxicology and efficacy. At the appropriate time, subject to the approval of regulatory authorities, we expect to conduct early-stage clinical trials for each drug candidate. We anticipate funding these trials ourselves, and possibly with the assistance of federal grants, contracts or other agreements. As we obtain results from trials, we may elect to discontinue or delay clinical trials for certain products in order to focus our resources on more promising products. Completion of clinical trials may take several years, and the length of time generally varies substantially according to the type, complexity, novelty and intended use of a product candidate.

The commencement and completion of clinical trials for our products may be delayed by many factors, including lack of efficacy during clinical trials, unforeseen safety issues, slower than expected participant recruitment, lack of funding or government delays. In addition, we may encounter regulatory delays or rejections as a result of many factors, including results that do not support the intended safety or efficacy of our product candidates, perceived defects in the design of clinical trials and changes in regulatory policy during the period of product development. As a result of these risks and uncertainties, we are unable to accurately estimate the specific timing and costs of our clinical development programs or the timing of material cash inflows, if any, from our product candidates. Our business, financial condition and results of operations may be materially adversely affected by any delays in, or termination of, our clinical trials or a determination by the FDA that the results of our trials are inadequate to justify regulatory approval, insofar as cash in-flows from the relevant drug or program would be delayed or would not occur.

Results of Operations

We anticipate that our results of operations will fluctuate for the foreseeable future due to several factors, such as the progress of our research and development efforts and the timing and outcome of regulatory submissions. Due to these uncertainties, accurate predictions of future operations are difficult or impossible to make.

Three Months Ended March 31, 2017 Compared to Three Months Ended March 31, 2016

Research and Development Expenses. Research and development expenses for the three months ended March 31, 2017 were \$3.0 million, a decrease of \$7.7 million, or 72%, from \$10.7 million for the three months ended March 31, 2016. This decrease is predominately due to the discontinuation of development work related to the episodic tension-type headache and fibromyalgia programs. During the three months ended March 31, 2017, we incurred \$1.4 million, \$31,000 and \$0.3 million in clinical, non-clinical and manufacturing, respectively, as compared to \$6.2 million, \$0.9 million and \$1.3 million for the same period last year, respectively. Costs related to product development were \$0.1 million for the three months ended March 31, 2016. There were no product development expenses during the three months ended March 31, 2017. The decrease is primarily due to the reduction in active trials.

Compensation-related expenses were \$0.6 million for the three months ended March 31, 2017, down from \$1.0 million for the three months ended March 31, 2016, a decrease of \$0.4 million, or 40%. Cash compensation-related expenses were \$0.5 million for the three months ended March 31, 2017, a decrease of \$0.3 million, or 38%, from \$0.8 million for the three months ended March 31, 2016. We incurred \$0.1 million in stock-based compensation for the three months ended March 31, 2017, a decrease of \$0.1 million, or 50%, from \$0.2 million for the three months ended March 31, 2016, in connection with the vesting of stock options, which were previously issued to officers and consultants. The decrease in cash compensation-related expenses was primarily a result of a reduction in personnel. Regulatory and legal costs for the three months ended March 31, 2017 were \$0.3 million, a decrease of \$0.2 million, or 40%, from \$0.5 million for the three months ended March 31, 2016. The decrease is primarily due to the reduction in active trials.

Travel, meals and entertainment costs were \$0.3 million for both reporting periods. Travel, meals and entertainment costs included travel related to clinical development, including investigator meetings and medical-related conferences. Other research and development costs decreased to \$0.1 million for the three months ended March 31, 2017, from \$0.4 million for the three months ended March 31, 2016 a decrease of \$0.3 million, or 75%. Other research and development costs included rent, insurance and other office-related expenses.

General and Administrative Expenses. General and administrative expenses for the three months ended March 31, 2017 were \$2.1 million, a decrease of \$1.2 million, or 36%, from \$3.3 million incurred in the three months ended March 31, 2016. This decrease is primarily due to a reduction in compensation-related expenses.

Compensation-related expenses decreased to \$1.0 million for the three months ended March 31, 2017, from \$1.9 million for the three months ended March 31, 2016, a decrease of \$0.9 million, or 47%. Cash compensation-related expenses were \$0.5 million for the three months ended March 31, 2017, a decrease of \$0.6 million, or 55%, from \$1.1 million for the three months ended March 31, 2016. We incurred \$0.5 million in stock-based compensation in connection with the employee stock purchase plan and the vesting of restricted stock units and stock options in the three months ended March 31, 2017, which were previously issued to board members, officers, employees and a consultant, as compared to \$0.8 million in stock-based compensation for the same period last year. The decrease in cash compensation-related costs of \$0.6 million was primarily a result of a reduction in personnel.

Professional services for the three months ended March 31, 2017 totaled \$0.8 million, a decrease of \$0.1 million, or 11%, over the \$0.9 million incurred for the three months ended March 31, 2016. Of professional services, legal fees totaled \$0.2 million for the three months ended March 31, 2017, a decrease of \$0.1 million, or 33%, from \$0.3 million incurred for the three months ended March 31, 2016. The decrease is mainly due to less international legal work. Audit and accounting fees incurred for the three months ended March 31, 2017 and 2016 were both \$0.1 million. Investor and public relations fees for the three months ended March 31, 2017 totaled \$0.2 million, a decrease of \$0.1 million, or 33%, from \$0.3 million incurred for the three months ended March 31, 2016. Other professional fees for the three months ended March 31, 2017 totaled \$0.3 million, an increase of \$0.1 million, or 50%, from \$0.2 million incurred for the three months ended March 31, 2016. Other professional fees included human resources and corporate consultants.

Travel, meals and entertainment costs for the three months ended March 31, 2017 were \$47,000, a decrease of \$55,000, or 54%, from \$102,000 incurred in the three months ended March 31, 2016, due to reduction in travel-related activities. Office and other administrative expenses totaled \$0.3 million for the three months ended March 31, 2017, a decrease of \$0.1 million, or 25%, from \$0.4 million incurred for the same period last year. Office and other administrative expenses included rent, insurance and other office-related expenses.

Net Loss. As a result of the foregoing, the net loss for the three months ended March 31, 2017 was \$5.1 million, compared to a net loss of \$14.0 million for the three months ended March 31, 2016, a decrease of \$8.9 million, or 64%.

Liquidity and Capital Resources

As of March 31, 2017, we had working capital of \$21.7 million, comprised primarily of cash, cash equivalents and marketable securities of \$22.4 million and prepaid expenses and other of \$1.0 million, which was offset by \$0.8 million of accounts payable and \$0.9 million of accrued expenses. Our cash and cash equivalents consisted of bank deposit accounts and money market funds. A significant portion of the accounts payable and accrued expenses are due to work performed in relation to our phase 3 HONOR study of TNX-102 SL in PTSD. For the three months ended March 31, 2017 and 2016, we used approximately \$4.8 million and \$15.5 million of cash in operating activities, respectively, which represents cash outlays for research and development and general and administrative expenses in such periods. The decrease in cash outlays principally resulted from a reduction in clinical, non-clinical, manufacturing and compensation-related activities. For the three months ended March 31, 2017, approximately \$1.1 million was raised through the sale of shares of common stock.

Cash provided by investing activities for the quarter ended March 31, 2017 was approximately \$4.7 million, all of which related to the maturity of marketable securities. Cash provided by investing activities for the quarter ended March 31, 2016 was approximately \$4.7 million, of which \$4.8 million related to the maturity of marketable securities offset by \$0.1 million related to the purchase of equipment and leasehold improvements.

April 2017 Financing

On March 30, 2017, we entered into an underwriting agreement with Aegis Capital Corp., as representative of the several underwriters (collectively, the “2017 Underwriters”), relating to the issuance and sale of 1,800,000 shares of our common stock, in an underwritten public offering (the “April 2017 Financing”). The public offering price for each share of common stock was \$4.45. We granted the 2017 Underwriters an option to purchase up to an additional 270,000 shares of common stock to cover over-allotments, if any.

The April 2017 Financing closed on April 4, 2017. The 2017 Underwriters purchased the shares at a seven percent discount to the public offering price, for an aggregate discount of \$0.6 million (or \$0.31 per share). We also expect to incur offering expenses of approximately \$0.2 million. We expect to receive net proceeds of approximately \$7.2 million. On April 13, 2017, the 2017 Underwriters fully exercised the over-allotment option and purchased 270,000 shares of common stock for net proceeds of approximately \$1.1 million, net of an aggregate discount of \$0.1 million (or \$0.31 per share).

At-the-Market Offering

On April 28, 2016, we entered into a sales agreement (“Sales Agreement”) with Cowen and Company, LLC (“Cowen”), as sales agent, pursuant to which we may, from time to time, issue and sell common stock with an aggregate value of up to \$15.0 million in at-the-market (“ATM”) sales. On the same day, we filed a prospectus supplement under its existing shelf registration relating to the Sales Agreement. Cowen is acting as sole sales agent for any sales made under the Sales Agreement for a 3% commission on gross proceeds. Our common stock will be sold at prevailing market prices at the time of the sale, and, as a result, prices may vary. Unless otherwise terminated earlier, the Sales Agreement continues until all shares available under the Sales Agreement have been sold. Between February and April 2017, we sold an aggregate of 1,486,474 shares of common stock using the ATM, resulting in net proceeds of \$9.1 million, net of expenses, which included Cowen’s commission of approximately \$0.3 million. We have sold all \$15 million of shares under the Sales Agreement, and the Sales Agreement has been terminated.

Future Liquidity Requirements

We expect to incur losses from operations for the near future. We expect to incur increasing research and development expenses, including expenses related to additional clinical trials. We expect that our general and administrative expenses will decrease in the near term, as we have taken certain measures to reduce costs in order to preserve cash to fund our activities through at least the end of the ongoing Phase 3 HONOR study in military-related PTSD. Our existing cash and marketable securities are sufficient to fund our operating expenses and planned clinical trial through at least the next 12 months.

Our future capital requirements will depend on a number of factors, including the progress of our research and development of product candidates, the timing and outcome of regulatory approvals, the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims and other intellectual property rights, the status of competitive products, the availability of financing and our success in developing markets for our product candidates.

We will need to obtain additional capital in order to fund future research and development activities. Future financing may include the issuance of equity or debt securities, obtaining credit facilities, or other financing mechanisms. Even if we are able to raise the funds required, it is possible that we could incur unexpected costs and expenses, fail to collect significant amounts owed to us, or experience unexpected cash requirements that would force us to seek alternative financing. Furthermore, if we issue additional equity or debt securities, shareholders may experience additional dilution or the new equity securities may have rights, preferences or privileges senior to those of existing holders of our common stock.

If additional financing is not available or is not available on acceptable terms, we may be required to delay, reduce the scope of or eliminate our research and development programs, reduce our commercialization efforts or obtain funds through arrangements with collaborative partners or others that may require us to relinquish rights to certain product candidates that we might otherwise seek to develop or commercialize independently.

Stock Compensation

Stock Options

In April 2012, our stockholders approved the 2012 Incentive Stock Option Plan, which was amended and restated in February 2013 (“2012 Plan”). The 2012 Plan provided for the issuance of options to purchase up to 55,000 shares of our common stock to officers, directors, employees and consultants. With the adoption of the 2016 Plan (as defined below), no further grants may be made under the 2012 Plan, and the only current activity relates to the administration of existing options under the 2012 Plan.

On June 9, 2014, our stockholders approved the Tonix Pharmaceuticals Holding Corp. 2014 Stock Incentive Plan (the “2014 Plan” and together with the 2012 Plan, the “Prior Plans”). Under the terms of the 2014 Plan, we may have issued (1) stock options (incentive and nonstatutory), (2) restricted stock, (3) stock appreciation rights, or SARs, (4) restricted stock units, or RSUs, (5) other stock-based awards, and (6) cash-based awards. The 2014 Plan provided for the issuance of up to 180,000 shares of common stock. With the adoption of the 2016 Plan, no further grants may be made under the 2014 Plan, and the only current activity relates to the administration of existing options under the 2014 Plan.

On May 11, 2016, our stockholders approved the Tonix Pharmaceuticals Holding Corp. 2016 Stock Incentive Plan (the “2016 Plan” and together with the Prior Plans, the “Plans”). As a result of adoption of the 2016 Plan, no further grants may be made under the Prior Plans. Under the terms of the 2016 Plan, we may issue (1) stock options (incentive and nonstatutory), (2) restricted stock, (3) SARs, (4) RSUs, (5) other stock-based awards, and (6) cash-based awards. The 2016 Plan provides for the issuance of up to 278,500 shares of common stock, which amount will be (a) reduced by awards granted under the 2014 Plan after December 31, 2015, and (b) increased to the extent that awards granted under the Plans are forfeited, expire or are settled for cash (except as otherwise provided in the 2016 Plan).

In terms of calculating how many shares are reduced or increased based on activity under the Prior Plans after December 31, 2015, the calculation shall be based on one share for every one share that was subject to an option or SAR and 1.25 shares for every one share that was subject to an award other than an option or SAR. With respect to awards intended to qualify as performance-based compensation under Section 162(m) of the Code, the 2016 Plan provides that, subject to adjustment as provided in the plan, no participant may, in any 12-month period (i) be granted options or SARs with respect to more than 75,000 shares of our common stock, (ii) earn more than 50,000 shares of our common stock under restricted stock awards, restricted stock unit awards, performance awards and/or other share-based awards, or (iii) earn more than \$5,000,000 under an award; provided, however, that each of these limitations shall be multiplied by two (2) with respect to awards granted to a participant during the first calendar year in which the participant commences employment with us or any of our subsidiaries. The Board of Directors determines the exercise price, vesting and expiration period of the grants under the 2016 Plan. However, the exercise price of an incentive stock option may not be less than 110% of fair value of the common stock at the date of the grant for a 10% or more shareholder and 100% of fair value for a grantee who is not a 10% shareholder. The fair value of the common stock is determined based on quoted market price or in absence of such quoted market price, by the Board of Directors in good faith. Additionally, the vesting period of the grants under the 2016 Plan may not be more than five years and the expiration period not more than ten years. We reserved 278,500 shares of our common stock for future issuance under the terms of the 2016 Plan. As of March 31, 2017, 122,596 shares were available for future grants under the 2016 Plan.

We measure the fair value of stock options on the date of grant, based on a Binomial option pricing model using certain assumptions discussed in the following paragraph, and the closing market price of our common stock on the date of the grant. For employees and directors, the fair value of the award is measured on the grant date and for non-employees, the fair value of the award is generally re-measured on vesting dates and interim financial reporting dates until the service period is complete. Most stock options granted pursuant to the Plans typically vest 1/3rd 12 months from the date of grant and 1/36th each month thereafter for 24 months and expire ten years from the date of grant. In addition, we also issue performance-based options to executive officers, which options vest when the target parameters are met, subject to a one year minimum service period prior to vesting. Stock-based compensation expense related to awards is amortized over the applicable vesting period using the straight-line method.

On March 1, 2017, 61,750 options were granted to employees with an exercise price of \$5.50, exercisable for a period of ten years and a grant date fair value of \$3.36. Additionally, we granted options to purchase 28,250 shares of our common stock to employees with an exercise price of \$5.50, exercisable for a period of ten years and vesting 50% upon our achieving enrollment of 250 participants in the ongoing HONOR study by December 31, 2017, and the remaining 50% vesting 1% for each participant that is enrolled in the HONOR study by December 31, 2017 in excess of 250, subject to a one year minimum service period prior to vesting.

On February 9, 2016, 40,300 options were granted to employees with an exercise price of \$50.30 and exercisable for a period of ten years. Additionally, we granted options to purchase 20,000 shares of our common stock to employees with an exercise price of \$50.30, exercisable for a period of ten years, and vesting 1/3 each upon our common stock having an average closing sale price equal to or exceeding each of \$60.00, \$70.00 and \$80.00 per share for 20 consecutive trading days, subject to a one year minimum service period prior to vesting.

On March 31, 2016, 108,541 and 1,320 options with exercise prices of \$98.70, \$66.80 and \$59.50, respectively, were forfeited.

Stock-based compensation expense relating to options granted of \$0.5 million and \$0.8 million was recognized for the three month periods ended March 31, 2017 and 2016, respectively.

As of March 31, 2017, we had approximately \$1.6 million of total unrecognized compensation cost related to non-vested awards granted under the Plans, which we expect to recognize over a weighted average period of 1.39 years.

Employee Stock Purchase Plan

On June 9, 2014, we approved the Tonix Pharmaceuticals Holdings Corp. 2014 Employee Stock Purchase Plan (the "2014 ESPP"). The 2014 ESPP allows eligible employees to purchase up to an aggregate of 30,000 shares of our common stock. Under the 2014 ESPP, on the first day of each offering period, each eligible employee for that offering period has the option to enroll for that offering period, which allows the eligible employees to purchase shares of our common stock at the end of the offering period. Each offering period under the 2014 ESPP is for six months, which can be modified from time-to-time. Subject to limitations, each participant will be permitted to purchase a number of shares determined by dividing the employee's accumulated payroll deductions for the offering period by the applicable purchase price, which is equal to 85 percent of the fair market value of our common stock at the beginning or end of each offering period, whichever is less. A participant must designate in his or her enrollment package the percentage (if any) of compensation to be deducted during that offering period for the purchase of stock under the 2014 ESPP, subject to the statutory limit under the Code. As of March 31, 2017, there were 19,449 shares available for future issuance under the 2014 ESPP.

The 2014 ESPP is considered a compensatory plan with the related compensation cost written off over the six month offering period. The compensation expense related to the 2014 ESPP for the quarters ended March 31, 2017 and 2016 was \$36,000 and \$59,000, respectively. As of March 31, 2017, approximately \$42,000 of employee payroll deductions, which had been withheld since January 1, 2017, the commencement of the offering period ending June 30, 2017, are included in accrued expenses in the accompanying balance sheet. In January 2017, 2,496 shares that were purchased as of December 31, 2016, were issued under the 2014 ESPP, and approximately \$10,000 of employee payroll deductions accumulated at December 31, 2016, related to acquiring such shares, was transferred from accrued expenses to additional paid in capital.

Restricted Stock Units

In February 2017, 5,625 RSUs that were granted to our non-employee directors for board services in 2016, in lieu of cash, with a one year vesting from the grant date and a fair value of \$38.10 at the date of grant vested, and 5,625 shares of our common stock were issued during the three months ended March 31, 2017.

Stock-based compensation expense related to RSU grants was \$50,000 and \$79,000 for the three months ended March 31, 2017 and 2016, respectively. As of March 31, 2017, the stock-based compensation relating to RSU's of \$21,000 remains unamortized and is expected to be amortized over the remaining period of two months.

Lease Commitments

As of March 31, 2017, future minimum lease payments under operating leases for office space were as follows (in thousands):

Year Ending December 31,	
2017	\$ 387
2018	459
2019	181
	<u>\$ 1,027</u>

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities and expenses. We evaluate our estimates and judgments on an ongoing basis. We base our estimates on historical experience and on assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

Research and Development. We outsource our research and development efforts and expense the related costs as incurred, including the cost of manufacturing product for testing, licensing fees and costs associated with planning and conducting clinical trials. The value ascribed to patents and other intellectual property acquired was expensed as research and development costs, as it related to particular research and development projects and had no alternative future uses.

We estimate our accrued expenses. Our clinical trial accrual process is designed to account for expenses resulting from our obligations under contracts with vendors, consultants and clinical research organizations and clinical site agreements in connection with conducting clinical trials. The financial terms of these contracts are subject to negotiations, which vary from contract to contract and may result in payment flows that do not match the periods over which materials or services are provided to us under such contracts. We account for trial expenses according to the progress of the trial as measured by participant progression and the timing of various aspects of the trial. We determine accrual estimates that take into account discussions with applicable personnel and outside service providers as to the progress or state of completion of trials, or the services completed. During the course of a clinical trial, we adjust our clinical expense recognition if actual results differ from our estimates. We make estimates of our accrued expenses as of each balance sheet date based on the facts and circumstances known to us at that time. Our clinical trial accruals and prepaid assets are dependent upon the timely and accurate reporting of contract research organizations and other third-party vendors.

Stock-Based Compensation. All stock-based payments to employees and to nonemployee directors for their services as directors consisted of grants of restricted stock and stock options, which are measured at fair value on the grant date and recognized in the condensed consolidated statements of operations as compensation expense over the relevant vesting period. Restricted stock payments to nonemployees are recognized as an expense over the period of performance. Such payments are measured at fair value at the earlier of the date a performance commitment is reached or the date performance is completed. In addition, for awards that vest immediately and are nonforfeitable, the measurement date is the date the award is issued.

Income Taxes. Deferred income tax assets and liabilities are determined based on the estimated future tax effects of net operating loss and credit carryforwards and temporary differences between the tax basis of assets and liabilities and their respective financial reporting amounts measured at the current enacted tax rates. We record an estimated valuation allowance on its deferred income tax assets if it is not more likely than not that these deferred income tax assets will be realized. We recognized a tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position. The tax benefits recognized in the consolidated financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement.

Recent Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2016-02, Leases (Topic 842). Under the new guidance, lessees will be required to recognize the following for all leases (with the exception of short-term leases) at the commencement date: a lease liability, which is a lessee’s obligation to make lease payments arising from a lease, measured on a discounted basis; and a right-of-use asset, which is an asset that represents the lessee’s right to use, or control the use of, a specified asset for the lease term. Public business entities should apply the amendments in ASU 2016-02 for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early application is permitted. Lessees (for capital and operating leases) must apply a modified retrospective transition approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. The modified retrospective approach would not require any transition accounting for leases that expired before the earliest comparative period presented. Lessees may not apply a full retrospective transition approach. We are currently evaluating the impact of adopting this guidance.

ITEM 3 - QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not required under Regulation S-K for “smaller reporting companies.”

ITEM 4 - CONTROLS AND PROCEDURES

Evaluation of disclosure controls and procedures.

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures pursuant to Rule 13a-15 under the Securities Exchange Act of 1934 as of the end of the period covered by this Quarterly Report on Form 10-Q. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Based on our evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of March 31, 2017, our disclosure controls and procedures are designed at a reasonable assurance level and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Changes in internal control over financial reporting.

There were no changes in our internal control over financial reporting that occurred during the quarter ended March 31, 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1. Legal Proceedings

We are currently not a party to any material legal proceedings or claims.

Item 1A. Risk Factors

Not required under Regulation S-K for “smaller reporting companies.”

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Item 6. Exhibits

- | | |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 31.01 | <u>Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u> |
| 31.02 | <u>Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u> |
| 32.01 | <u>Certifications of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u> |
| 101 INS | XBRL Instance Document |
| 101 SCH | XBRL Taxonomy Extension Schema Document |
| 101 CAL | XBRL Taxonomy Calculation Linkbase Document |
| 101 LAB | XBRL Taxonomy Labels Linkbase Document |
| 101 PRE | XBRL Taxonomy Presentation Linkbase Document |
| 101 DEF | XBRL Taxonomy Extension Definition Linkbase Document |

SIGNATURES

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

TONIX PHARMACEUTICALS HOLDING CORP.

Date: May 12, 2017

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

Date: May 12, 2017

By: /s/ BRADLEY SAENGER
Bradley Saenger
Chief Financial Officer (Principal Financial Officer and
Principal Accounting Officer)

CERTIFICATION

I, Seth Lederman, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Tonix Pharmaceuticals Holding Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonable likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls over financial reporting.

Date: May 12, 2017

/s/ SETH LEDERMAN

Seth Lederman
Chief Executive Officer

CERTIFICATION

I, Bradley Saenger, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Tonix Pharmaceuticals Holding Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonable likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls over financial reporting.

Date: May 12, 2017

/s/ BRADLEY SAENGER

Bradley Saenger
Chief Financial Officer

**CERTIFICATIONS OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, Seth Lederman, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Tonix Pharmaceuticals Holding Corp. on Form 10-Q for the fiscal quarter ended March 31, 2017 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in this Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of Tonix Pharmaceuticals Holding Corp.

Date: May 12, 2017

By: /s/ SETH LEDERMAN
Name: Seth Lederman
Title: *Chief Executive Officer*

I, Bradley Saenger, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Tonix Pharmaceuticals Holding Corp. on Form 10-Q for the fiscal quarter ended March 31, 2017 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in this Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of Tonix Pharmaceuticals Holding Corp.

Date: May 12, 2017

By: /s/ BRADLEY SAENGER
Name: Bradley Saenger
Title: *Chief Financial Officer*
