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 June 30, 2020

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	**26-1434750**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

509 Madison Avenue, Suite 1608
New York, New York 10022

(Address of principal executive offices) (zip code)

(212) 980-9155

(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	TNXP	The NASDAQ Global Market

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, smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☐

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

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 August 7, 2020, there were 130,273,710 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)

	June 30, 2020 (unaudited)	December 31, 2019
ASSETS		
Current assets:		
Cash	$ 55,022	$ 11,249
Prepaid expenses and other	2,605	2,699
Total current assets	57,627	13,948
Property and equipment, net	37	34
Right-of-use assets, net	441	356
Security Deposit	20	—
Restricted cash	100	100
Intangible Asset	120	120
Total assets	$ 58,345	$ 14,558
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 3,189	$ 3,070
Accrued expenses and other current liabilities	1,143	1,713
Lease liability, current	346	352
Total current liabilities	4,678	5,135
Lease liability, net of current portion	95	6
Total liabilities	4,773	5,141
Commitments (See Note 12)		
Stockholders' equity:		
Preferred stock, $0.001 par value; 5,000,000 shares authorized Series B Convertible Preferred stock, $0.001 par value; 5,313 shares designated; 0 issued and outstanding as of June 30, 2020, Series A Convertible Preferred stock, $0.001 par value; 7,938 shares designated; 0 issued and outstanding as of December 31, 2019	—	—
Common stock, $0.001 par value; 150,000,000 shares authorized; 104,803,906 and 8,531,504 shares issued and outstanding as of June 30, 2020 and December 31, 2019, respectively, and 1,578 shares to be issued as of December 31, 2019	105	9
Additional paid in capital	292,058	226,524
Accumulated deficit	(238,522)	(217,070)
Accumulated other comprehensive loss	(69)	(46)
Total stockholders' equity	53,572	9,417
Total liabilities and stockholders' equity	$ 58,345	$ 14,558

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 June 30,		Six Months Ended June 30,	
	2020	**2019**	**2020**	**2019**
COSTS AND EXPENSES:				
Research and development	$ 10,571	$ 3,554	$ 15,247	$ 7,450
General and administrative	3,621	2,352	6,242	4,753
	14,192	5,906	21,489	12,203
Operating Loss	(14,192)	(5,906)	(21,489)	(12,203)
Interest income, net	13	66	37	130
Net loss	(14,179)	(5,840)	(21,452)	(12,073)
Warrant deemed dividend	—	—	451	—
Preferred stock deemed dividend	—	—	1,260	—
Net loss available to common stockholders	$ (14,179)	$ (5,840)	$ (23,163)	$ (12,073)
Net loss per common share, basic and diluted	$ (0.23)	$ (9.42)	$ (0.54)	$ (21.77)
Weighted average common shares outstanding, basic and diluted	62,391,006	620,204	43,209,988	554,624

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 June 30,		Six Months Ended June 30,	
	2020	**2019**	**2020**	**2019**
Net loss	$ (14,179)	$ (5,840)	$ (21,452)	$ (12,073)
Other comprehensive loss:				
Foreign currency translation loss	(9)	—	(23)	2
Comprehensive loss	$ (14,188)	$ (5,840)	$ (21,475)	$ (12,071)

See the accompanying notes to the condensed consolidated financial statements

TONIX PHARMACEUTICALS HOLDING CORP.
CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
SIX MONTHS ENDED JUNE 30, 2020
(In Thousands, Except Share and Per Share Amounts)
(unaudited)

	Series B Convertible Preferred stock		Common stock		Additional Paid in Capital	Accumulated Other Comprehensive Gain (loss)	Accumulated Deficit	Total
	Shares	Amount	Shares	Amount				
Balance, December 31, 2019	—	$ —	8,531,504	$ 9	$ 226,524	$ (46)	$ (217,070)	$ 9,417
Issuance of common stock in exchange for exercise of warrants in February and March 2020 ($0.57 per share)	—	—	13,111,999	13	7,461	—	—	7,474
Deemed dividend in connection with repricing of November 2019 warrants	—	—	—	—	451	—	—	451
Warrant deemed dividend	—	—	—	—	(451)	—	—	(451)
Issuance of Series B Convertible preferred stock and common stock warrants in February 2020 ($1,000.00 per share, net of transactional expenses of $711)	5,313	—	—	—	4,602	—	—	4,602
Beneficial conversion feature in connection with issuance of Series B Convertible preferred stock	—	—	—	—	1,260	—	—	1,260
Preferred stock deemed dividend	—	—	—	—	(1,260)	—	—	(1,260)
Issuance of common stock and common stock warrants in February 2020 ($0.57 per share, net of transactional expenses of $292)	—	—	3,837,000	4	1,891	—	—	1,895
Issuance of common stock upon conversion of Series B Convertible preferred stock	(5,313)	—	9,321,053	9	(9)	—	—	—
Issuance of common stock in March 2020 ($1.10 per share, net of transactional expenses of $1,221)	—	—	14,550,000	14	14,770	—	—	14,784
Employee stock purchase plan	—	—	1,578	—	2	—	—	2
Stock-based compensation	—	—	—	—	360	—	—	360
Foreign currency transaction gain	—	—	—	—	—	(14)	—	(14)
Net loss	—	—	—	—	—	—	(7,273)	(7,273)
Balance, March 31, 2020	—	—	49,353,134	49	255,601	(60)	(224,343)	31,247
Issuance of common stock under 2019 Purchase Agreement			464,471	1	277			278
Issuance of common stock in May and June 2020 under At-the-market offering, net of transaction expenses of $1,131	—	—	52,986,301	53	34,089	—	—	34,142
Issuance of common stock in the acquisition of Trigemina assets	—	—	2,000,000	2	1,358	—	—	1,360
Stock-based compensation	—	—	—	—	733	—	—	733
Foreign currency transaction gain	—	—	—	—	—	(9)	—	(9)
Net loss	—	—	—	—	—	—	(14,179)	(14,179)
Balance, June 30, 2020	—	$ —	104,803,906	$ 105	$ 292,058	$ (69)	$ (238,522)	$ 53,572

See the accompanying notes to the condensed consolidated financial statements

TONIX PHARMACEUTICALS HOLDING CORP.
CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
SIX MONTHS ENDED JUNE 30, 2019
(In Thousands, Except Share and Per Share Amounts)
(unaudited)

	Series A Convertible Preferred stock		Common stock		Additional Paid in Capital	Accumulated Other Comprehensive Gain (loss)	Accumulated Deficit	Total
	Shares	Amount	Shares	Amount				
Balance, December 31, 2018	9,856	$ —	328,689	$ —	$ 212,157	$ (41)	$ (188,452)	$ 23,664
Issuance of common stock upon conversion of Series A Convertible preferred stock	(9,856)	—	281,610	1	(1)	—	—	—
Issuance of common stock in exchange for exercise of warrants in March 2019 ($35.00 per share)	—	—	2,000	—	70	—	—	70
Employee stock purchase plan	—	—	177	—	3	—	—	3
Stock-based compensation	—	—	—	—	305	—	—	305
Foreign currency transaction gain	—	—	—	—	—	2	—	2
Net loss	—	—	—	—	—	—	(6,233)	(6,233)
Balance, March 31, 2019	$ —	$ —	$ 612,476	$ 1	$ 212,534	$ (39)	$ (194,685)	$ 17,811
Issuance of common stock under 2018 Purchase Agreement	—	—	22,754	—	387	—	—	387
Issuance of common stock under At-the-market offering, net of transactional expenses of $1	—	—	2,105	—	33	—	—	33
Stock-based compensation	—	—	—	—	431	—	—	431
Foreign currency transaction loss	—	—	—	—	—	—	—	—
Net loss	—	—	—	—	—	—	(5,840)	(5,840)
Balance, June 30, 2019	—	$ —	637,335	$ 1	$ 213,385	$ (39)	$ (200,525)	$ 12,822

See the accompanying notes to the condensed consolidated financial statements

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

	Six Months Ended June 30,	
	2020	**2019**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (21,452)	$ (12,073)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	12	16
Common stock issued to acquire in-process research and development	1,360	—
Stock-based compensation	1,093	736
Changes in operating assets and liabilities:		
Prepaid expenses and other	74	(987)
Accounts payable	118	(358)
Lease liabilities and ROU asset, net	(2)	2
Accrued expenses and other current liabilities	(570)	(691)
Net cash used in operating activities	(19,367)	(13,355)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of furniture and fixtures	(14)	(10)
Net cash used by investing activities	(14)	(10)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from exercise of warrants	7,474	70
Proceeds from ESPP	2	—
Proceeds, net of $711 and $0 expenses, from sale of preferred stock	4,602	—
Proceeds, net of $2,644 and $1 expenses, from sale of common stock and warrants	51,099	420
Net cash provided by financing activities	63,177	490
Effect of currency rate change on cash	(23)	(9)
Net increase (decrease) in cash, cash equivalents and restricted cash	43,773	(12,884)
Cash, cash equivalents and restricted cash beginning of the period	11,349	25,134
Cash, cash equivalents and restricted cash end of period	$ 55,122	$ 12,250
Supplemental disclosures of cash flow information:		
Non-cash financing activities:		
Warrants deemed dividend	$ 451	$ —
Series B Convertible preferred stock deemed dividend	$ 1,260	$ —

See the accompanying notes to the condensed consolidated financial statements

NOTE 1 – BUSINESS

Tonix Pharmaceuticals Holding Corp., through its wholly owned subsidiary Tonix Pharmaceuticals, Inc. ("Tonix Sub"), is a clinical-stage biopharmaceutical focused on discovering, licensing, acquiring and developing small molecules and biologics to treat and prevent human disease and alleviate suffering. All drug product candidates are still in development.

The condensed 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"). All intercompany balances and transactions have been eliminated in consolidation.

Going Concern

The accompanying financial statements have been prepared on a basis which assumes that the Company will continue as a going concern and which contemplates the realization of assets and satisfaction of liabilities and commitments in the normal course of business. The Company has suffered recurring losses from operations and negative cash flows from operating activities. At June 30, 2020, the Company had working capital of approximately $53.0 million. At June 30, 2020, the Company had an accumulated deficit of approximately $238.5 million. The Company held cash and cash equivalents of approximately $55.0 million as of June 30, 2020.

The Company believes that its cash resources will be sufficient to meet its projected operating requirements through at least the end of 2020, but it will not have enough resources to meet its operating requirements for the one-year period from the date of filing of this Form 10-Q. These factors raise substantial doubt about the Company's ability to continue as a going concern. The Company continues to face significant challenges and uncertainties and, as a result, its available capital resources may be consumed more rapidly than currently expected due to changes it may make in its research and development spending plans. The Company has the ability to obtain additional funding through public or private financing or collaborative arrangements with strategic partners to increase the funds available to fund operations. However, the Company may not be able to raise capital with terms acceptable to the Company. Without additional funds, it may be forced to delay, scale back or eliminate some of our research and development activities, or other operations and potentially delay product development in an effort to provide sufficient funds to continue our operations. If any of these events occurs, our ability to achieve our development and commercialization goals would be adversely affected. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

In December 2019, a novel strain of Coronavirus ("COVID-19") emerged that has caused significant disruptions to the U.S. and global economy. The spread of COVID-19 has led to regional quarantines, business shutdowns, labor shortages, disruptions to supply chains, and overall economic instability. Any of these events may in the future have a material adverse effect on our business, operations and financial condition. The extent to which COVID-19 impacts our operations will depend on future developments, which are highly uncertain and cannot be predicted with confidence, including the duration of the outbreak, new information that may emerge concerning the severity of COVID-19 and the actions taken to contain COVID-19 or treat its impact, among other things.

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, 2019 contained herein has been derived from audited financial statements.

Operating results for the three and six months ended June 30, 2020 are not necessarily indicative of results that may be expected for the year ending December 31, 2020. 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, 2019 included in the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission ("SEC") on March 24, 2020.

Risks and uncertainties

The Company's primary efforts are devoted to conducting research and development of innovative pharmaceutical and biological 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. Moreover, the extent to which COVID-19 impacts the Company's operations will depend on future developments, which are highly uncertain and cannot be predicted with confidence at this time.

Use of estimates

The preparation of financial statements in accordance with GAAP 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 and Restricted Cash

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 June 30, 2020 and December 31, 2019, cash equivalents, which consisted of money market funds, amounted to $22.4 million and $5.4 million, respectively. Restricted cash at both June 30, 2020 and December 31, 2019 of approximately $100,000 collateralizes a letter of credit issued in connection with the lease of office space in New York City (see Note 11).

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the condensed consolidated balance sheets that sum to the total of the same amounts shown in the condensed consolidated statement of cash flow:

	June 30, 2020	December 31, 2019
	(in thousands)	
Cash and cash equivalents	$ 55,022	$ 11,249
Restricted cash	100	100
Total	$ 55,122	$ 11,349

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. Depreciation and amortization expense for the three and six months ended June 30, 2020 was $6,000 and $12,000, respectively, and $7,000 and $16,000, respectively, for the three and six months ended June 30, 2019. All property and equipment are located in the United States and Ireland.

Intangible assets with indefinite lives

During the year ended December 31, 2015, 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 tested for impairment annually or whenever events or changes in circumstances indicate that their carrying amount may be less than fair value. As of June 30, 2020, the Company believed that no impairment existed.

Leases

The Company determines if an arrangement is a lease at inception. Operating leases are included in operating lease right-of-use ("ROU") assets, operating lease liabilities, current and operating lease liabilities, noncurrent in the Company's condensed consolidated balance sheets. ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent its obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As the Company's leases do not provide an implicit rate, the Company uses an incremental borrowing rate based on the information available at the transition date and subsequent lease commencement dates in determining the present value of lease payments. This is the rate the Company would have to pay if borrowing on a collateralized basis over a similar term to each lease. The operating lease ROU asset excludes lease incentives. The Company's lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Lease expense for lease payments made under operating leases is recognized on a straight-line basis over the lease term.

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. 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 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.

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 a 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 condensed 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 June 30, 2020, the Company has not recorded any unrecognized tax benefits. The Company's policy is to recognize interest and penalties accrued on any unrecognized tax benefits as a component of income tax expense.

On March 27, 2020, President Trump signed into law the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act"). The CARES Act, among other things, includes provisions relating to refundable payroll tax credits, deferment of employer side social security payments, net operating loss carryback periods, alternative minimum tax credit refunds, modifications to the net interest deduction limitations, increased limitations on qualified charitable contributions, and technical corrections to tax depreciation methods for qualified improvement property. We continue to examine the impact that the CARES Act may have on our business. Currently, we do not believe the CARES Act will have a material impact on our accounting for income taxes.

Per Share Data

The computation of basic and diluted loss per share as of June 30, 2020 and 2019 excludes potentially dilutive securities when their inclusion would be anti-dilutive, or if their exercise prices were greater than the average market price of the common stock during the period.

All warrants issued participate on a one-for-one basis with common stock in the distribution of dividends, if and when declared by the Board of Directors, on the Company's common stock. For purposes of computing EPS, these warrants are considered to participate with common stock in earnings of the Company. Therefore, the Company calculates basic and diluted EPS using the two-class method. Under the two-class method, net income for the period is allocated between common stockholders and participating securities according to dividends declared and participation rights in undistributed earnings. No income was allocated to the warrants for the three and six months ended June 30, 2020, as results of operations were a loss for the period.

Potentially dilutive securities excluded from the computation of basic and diluted net loss per share, as of June 30, 2020 and 2019, are as follows:

	2020	2019
Warrants to purchase common stock	5,184,210	496,486
Options to purchase common stock	10,209,286	109,036
Totals	15,393,496	605,522

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.

As of June 30, 2020, and December 31, 2019, the Company used Level 1 quoted prices in active markets to value cash equivalents of $22.4 million and $5.4 million, respectively.

NOTE 4 – STOCKHOLDERS' EQUITY

On April 21, 2020, the Company received a letter (the "Notice") from the Listing Qualifications staff of The Nasdaq Stock Market LLC ("Nasdaq") indicating that, based upon the closing bid price of the Company's common stock for the last 30 consecutive business days, the Company no longer meets the requirement to maintain a minimum bid price of $1 per share, as set forth in Nasdaq Listing Rule 55450(a)(1) (the "Minimum Bid Price Requirement").

On August 3, 2020, the Company received a letter from Nasdaq stating that because the Company's shares had a closing bid price at or above $1.00 per share for a minimum of ten consecutive business days, the Company's stock had regained compliance with the minimum bid price requirement of $1.00 per share for continued listing on the NASDAQ Global Market, as set forth in NASDAQ Listing Rule 5450(a)(1), and that the matter is now closed.

NOTE 5 – ASSET PURCHASE AGREEMENT WITH TRIGEMINA

On June 11, 2020, the Company entered into an asset purchase agreement (the "Asset Purchase Agreement") with Trigemina, Inc. ("Trigemina") and certain shareholders named therein (the "Executive Shareholders") pursuant to which Tonix acquired Trigemina assets related to migraine and pain treatment technologies (the "Assets"). In connection with the acquisition of the Assets, Tonix assumed Trigemina's rights and obligations under that certain Amended and Restated Exclusive License Agreement, dated November 30, 2007, as amended, by and between Trigemina and The Board of Trustees of the Leland Stanford Junior University ("Stanford") (the "License "Agreement") pursuant to an Assignment and Assumption Agreement with Stanford ("Assignment and Assumption Agreement"), dated June 11, 2020. As consideration for entering into the Asset Purchase Agreement, Tonix has agreed to pay $824,759 to Trigemina and issued to Trigemina 2,000,000 shares of the Company's common stock, par value $0.001 per share (the "Common Stock"), and valued at $0.68 per share, based on the closing stock price on June 11th , and has agreed to pay to Stanford $250,241 pursuant to the terms of the Assignment and Assumption Agreement. The Common Stock is unregistered and subject to a 12 month lock-up and a Shareholder Voting Agreement, dated June 11, 2020 (the "Voting Agreement"), pursuant to which Trigemina and the Executive Shareholders have agreed to vote the Common Stock on any matter put to a vote of the shareholders of the Company in accordance with management's recommendations. Both the costs associated with the cash payments and share issuance, were recorded to research and development expenses in the statement of operations for the six months ended June 30, 2020. Because the Trigemina intellectual property was acquired prior to United States Food and Drug Administration approval ("FDA"), the cash and stock consideration was expensed as research and development costs since there is no alternative future use and the acquired intellectual property does not constitute a business.

Pursuant to the terms of the Assignment and Assumption Agreement, Stanford has granted to Tonix an exclusive license, with the right to sublicense, certain patents related to the Assets. Stanford has reserved for itself the right to practice under the patents for academic research and educational purposes. Tonix is obligated to use commercially reasonable efforts to diligently develop, manufacture, and sell products claimed or covered by the patent and will use commercially reasonable efforts to diligently develop markets for such products. The License Agreement specifies developmental milestones and the period of time during which such milestones must be completed, and provides for an annual maintenance fee payable to Stanford.

As of June 30, 2020, no milestone payments have been accrued or paid in relation to this agreement.

NOTE 6 – ASSET PURCHASE AGREEMENT WITH TRIMARAN

On August 19, 2019, the Company entered into an asset purchase agreement (the "TRImaran Asset Purchase Agreement") with TRImaran Pharma, Inc. ("TRImaran") and the selling shareholders named therein (the "Selling Shareholders") pursuant to which Tonix acquired TRImaran's assets related to certain pyran-based compounds (the "Assets"). In connection with the acquisition of the Assets, Tonix entered into a First Amended and Restated Exclusive License Agreement (the "WSU License Agreement") with Wayne State University ("WSU") on August 19, 2019. As consideration for entering into the TRImaran Asset Purchase Agreement, Tonix paid $100,000 to TRImaran and has assumed certain liabilities of TRImaran totaling $68,500. Upon the achievement of specified development, regulatory and sales milestones, Tonix also agreed to pay TRImaran and the Selling Shareholders, in restricted stock or cash, at Tonix's option, a total of approximately $3.4 million. Pursuant to the terms of the TRImaran Asset Purchase Agreement, TRImaran and the Selling Shareholders are prohibited from disclosing confidential information related to the Assets and are restricted from engaging, for a period of three years, in the development or commercialization of any therapeutic containing any pyran-based drug compound for the treatment of post-traumatic stress disorder, attention deficit hyperactivity disorder or major depressive disorder. Also for a period of three years, if TRImaran or any Selling Shareholder engage in the research or development of any potential therapeutic compound for the treatment of any central nervous system disorder, TRImaran or such Selling Shareholder is obliged to provide notice and opportunity to Tonix to make an offer to acquire or license rights with respect to such product candidate.

Pursuant to the terms of the WSU License Agreement, WSU has granted to Tonix an exclusive license, with the right to sublicense, certain patents, technical information and material (collectively, the "Technology") related to the Assets. WSU has reserved for itself the right to practice the Technology for academic research and educational purposes. Tonix is obligated to use commercially reasonable efforts to obtain regulatory approval for one or more products utilizing the Technology ("WSU Products") and to use commercially reasonable marketing efforts throughout the term of the WSU License Agreement. The WSU License Agreement specifies developmental milestones and the period of time during which such milestones must be completed and provides for an annual maintenance fee payable to WSU. Tonix is obligated to substantially manufacture WSU Products in the United States if WSU Products will be sold in the United States.

Pursuant to the WSU License Agreement, Tonix has agreed to pay $75,000 to WSU as reimbursement of certain patent expenses, and, upon the achievement of specified development, regulatory and sales milestones, the Company also agreed to pay WSU, milestone payments totaling approximately $3.4 million. Tonix has also agreed to pay WSU single-digit royalties on net sales of WSU Products sold by Tonix or a sublicensee on a tiered basis based on net sales, and additional sublicense fees on certain consideration received from sublicensees. Royalties on each particular WSU Product are payable on a country-by-country and Product-by-Product basis until the date of expiration of the last valid claim in the last to expire of the issued patents covered by the WSU License Agreement. Royalties payable on net sales of WSU Products may be reduced by 50% of the royalties payable by Tonix to any third party for intellectual property rights which are necessary for the practice of the rights licensed to Tonix under the WSU License Agreement, provided that the royalty payable on a WSU Product may not be reduced by more than 50%. Each party also has the right to terminate the agreement for customary reasons such as material breach and bankruptcy. The WSU License Agreement contains provisions relating to termination, indemnification, confidentiality and other customary matters for an agreement of this kind.

As of June 30, 2020, no milestone payments have been accrued or paid in relation to this agreement.

NOTE 7 – LICENSE AGREEMENTS WITH COLUMBIA UNIVERSITY

On September 16, 2019, the Company entered into an exclusive License Agreement (the "Columbia License Agreement") with the Trustees of Columbia University in the City of New York ("Columbia") pursuant to which Columbia granted to Tonix an exclusive license, with the right to sublicense, certain patents and technical information (collectively, the "TFF2 Technology") related to a recombinant Trefoil Family Factor 2 (TFF2), and to develop and commercialize products thereunder (each, a "TFF2 Product"). Pursuant to the terms of the Columbia License Agreement, Columbia has reserved for itself the right to practice the TFF2 Technology for academic research and educational purposes.

The Company has paid a five-digit license fee to Columbia as consideration for entering into the Columbia License Agreement, which was recorded to non-clinical expenses in the statement of operations for the year ended December 31, 2019. The Company is obligated to use Commercially Reasonable Efforts, as defined in the Columbia License Agreement, to develop and commercialize the TFF2 Product, and to achieve specified developmental milestones.

The Company has agreed to pay Columbia single-digit royalties on net sales of (i) TFF2 Products sold by Tonix or a sublicensee and (ii) any other products that involve material or technical information related to the TFF2 Product and transferred to Tonix pursuant to the Columbia License Agreement ("Other Products") sold by Tonix or a sublicensee. Royalties on each particular TFF2 Product are payable on a country-by-country and Product-by-Product basis until the latest of (i) the date of expiration of the last valid claim in the last to expire of the issued patents covered by the Columbia License Agreement, and (ii) a specified period of time after the first commercial sale of a TFF2 Product in the country in question. Royalties on each particular Other Product are payable on a country-by-country and product-by-product basis until a specified period of time after the first commercial sale of such particular Other Product in such country. Royalties payable on net sales of the TFF2 Product and Other Products may be reduced by 50% of the royalties payable by Tonix to any third party for intellectual property rights which are necessary for the practice of the rights licensed to Tonix under the Columbia License Agreement, provided that the royalty payable on a Product or Other Product may not be reduced by more than 50%.

The Company is also obligated to make contingent milestone payments to Columbia totaling $4.1 million on a Product-by-Product basis upon the achievement of certain development, approval and sales milestones related to a TFF2 Product. In addition, the Company shall pay Columbia 5% of consideration, other than royalty payments and certain other categories of consideration, payable to the Company by a sublicensee. As of June 30, 2020, no milestone payments have been accrued or paid in relation to this agreement.

On May 20, 2019, the Company entered into an exclusive License Agreement (the "License Agreement") with Columbia pursuant to which Columbia, for itself and on behalf of the University of Kentucky and the University of Michigan (collectively, the "Institutions") granted to the Company an exclusive license, with the right to sublicense, certain patents, technical information and material (collectively, the "Technology") related to a double-mutant cocaine esterase, and to develop and commercialize products thereunder (each, a "Product"). Pursuant to the terms of the License Agreement, Columbia has reserved for itself and the Institutions the right to practice the Technology for academic research and educational purposes.

The Company agreed to pay a six-digit license fee to Columbia as consideration for entering into the License Agreement. The Company is obligated to use Commercially Reasonable Efforts, as defined in the License Agreement, to develop and commercialize the Product, and to achieve specified developmental milestones. The first 50% of the license fee was paid by June 30, 2019, while the remaining 50% license fee, was paid during the second quarter of 2020. Both installments of the license fee were recorded to research and development expenses in the statement of operations for the year ended December 31, 2019.

The Company has agreed to pay Columbia single-digit royalties on net sales of (i) Products sold by the Company or a sublicensee and (ii) any other products that involve material or technical information related to the Product and transferred to the Company pursuant to the License Agreement ("Other Products") sold by the Company or a sublicensee. Royalties on each particular Product are payable on a country-by-country and Product-by-Product basis until the latest of (i) the date of expiration of the last valid claim in the last to expire of the issued patents covered by the License Agreement, (ii) a specified period of time after the first commercial sale of a Product in the country in question, or (iii) expiration of any market exclusivity period granted by a regulatory agency. Royalties on each particular Other Product are payable on a country-by-country and product-by-product basis until the later of (i) a specified period of time after the first commercial sale of such particular Other Product in such country or (ii) expiration of any market exclusivity period granted by a regulatory agency. Royalties payable on net sales of the Product and Other Products may be reduced by 50% of the royalties payable by the Company to any third party for intellectual property rights which are necessary for the practice of the rights licensed to the Company under the License Agreement, provided that the royalty payable on a Product or Other Product may not be reduced by more than 50%.

The Company is also obligated to make contingent milestone payments to Columbia totaling $3 million on a Product-by-Product basis upon the achievement of certain development, approval and sales milestones related to a Product. In addition, the Company shall pay Columbia 5% of consideration, other than royalty payments and certain other categories of consideration, payable to the Company by a sublicensee. As of June 30, 2020, no milestone payments have been accrued or paid in relation to this agreement.

NOTE 8 – SALE OF COMMON STOCK

2020 At-the-Market Offering

On April 8, 2020, the Company entered into a sales agreement (the "Sales Agreement"), with A.G.P/Alliance Global Partners ("AGP"), pursuant to which the Company may issue and sell, from time to time, shares of the Company's common stock having an aggregate offering price of up to $50.0 million in at-the-market offerings ("ATM") sales. On the same day, the Company filed a prospectus supplement under a shelf registration relating to the Sales Agreement. AGP will act as sales agent and will be paid a 3% commission on each sale under the Sales Agreement. The Company's common stock will be sold at prevailing market prices at the time of the sale, and, as a result, prices will vary. During the quarter ended June 30, 2020, the Company sold approximately 53.0 million shares of common stock under the Sales Agreement, for gross proceeds of approximately $35.3 million.

February 7th Financing

On February 7, 2020, the Company entered into an underwriting agreement ("the February 7th Financing") with AGP pursuant to which the Company sold securities consisting of 3,837,000 Class A Units at a public offering price of $0.57 per unit, with each unit consisting of one share of common stock and one warrant to purchase one share of common stock, and 5,313 Class B Units at a public offering price of $1,000 per unit, with each unit consisting of one share of Series B Convertible Preferred Stock, with a conversion price of $0.57 per share, convertible into 1,754.386 shares of common stock and warrants to purchase 1,754.386 shares of common stock. The warrants have an exercise price of $0.57, are immediately exercisable and expire five years from the date of issuance.

The February 7th Financing closed on February 11, 2020. AGP purchased the Class A and Class B Units at a seven-percent discount to the public offering price, for an aggregate discount of approximately $0.5 million. The Company incurred other offering expenses of approximately $0.5 million. The Company received net proceeds of approximately $6.5 million, after deducting the underwriting discount and other offering expenses.

After allocating proceeds to the warrants issued with the Series B Convertible Preferred Stock, the effective conversion price of the Series B Convertible Preferred Stock was determined to be less than the fair value of the underlying common stock at the date of commitment, resulting in a beneficial conversion feature ("BCF") at that date. Since the Series B Preferred Stock has no stated maturity or redemption date and is immediately convertible at the option of the holder, the discount created by the BCF of $1.3 million, based on intrinsic value, was charged to additional paid in capital as a non-cash "deemed dividend" and included in net loss to common stockholders.

During the first quarter of 2020, all 5,313 shares of Series B Convertible Preferred Stock were converted into common stock.

During February and March 2020, 10.8 million of the warrants issued in the February 7th financing, with an exercise price of $0.57, were exercised for proceeds of approximately $6.2 million.

February 28th Financing

On February 28, 2020, the Company entered into an underwriting agreement ("the February 28th Financing") with AGP, relating to the issuance and sale of 14,550,000 shares of common stock, in a registered direct public offering. The public offering price for each share of common stock was $1.10. The February 28th Financing closed on March 3, 2020. AGP purchased the shares at a seven percent discount to the then current public price, for an aggregate discount of $1.1 million. The Company incurred other offering expenses of approximately $0.1 million. The Company received net proceeds of approximately $14.8 million, after deducting the underwriting discount and other offering expenses.

November 2019 Financing

On November 14, 2019, the Company entered into an underwriting agreement with AGP pursuant to which the Company sold securities consisting of 547,420 Class A Units at a public offering price of $1.94 per unit, with each unit consisting of one share of common stock, one warrant to purchase one share of common stock ("primary warrant") and one-half of one warrant to purchase one half of one share common stock ("common warrant"), and 7,938 Class B Units at a public offering price of $1,000 per unit, with each unit consisting of one share of Series A Convertible Preferred Stock, with a conversion price of $1.94 per share, convertible into 515.464 shares of common stock, primary warrants to purchase 515.464 shares of common stock, and common warrants to purchase 257.732 shares of common stock. The primary warrants have an exercise price of $1.94, are immediately exercisable and expire five years from the date of issuance. The common warrants have an exercise price of $1.94, are exercisable and expire 12 months from the date of issuance. The common warrants are exercisable on a cashless basis at the option of the holder on the earlier of 30 days from issuance and the date by which an aggregate of $9.0 million of our securities were traded.

The November 2019 Financing closed on November 19, 2019. AGP purchased the Class A and Class B Units at a seven-percent discount to the public offering price, for an aggregate discount of approximately $0.6 million. The Company incurred other offering expenses of approximately $0.5 million. The Company received net proceeds from the November 2019 Financing of approximately $7.9 million, after deducting the underwriting discount and other offering expenses.

After allocating proceeds to the warrants issued with the Series A Convertible Preferred Stock, the effective conversion price of the Series A Convertible Preferred Stock was determined to be less than the fair value of the underlying common stock at the date of commitment, resulting in a BCF at that date. Since the Series A Preferred Stock has no stated maturity or redemption date and is immediately convertible at the option of the holder, the discount created by the BCF of $2.5 million, based on the intrinsic value, was charged to additional paid in capital as a non-cash "deemed dividend" and included in net loss to common stockholders.

As of December 31, 2019, all 7,938 shares of Series A Convertible Preferred Stock were converted into common stock.

With the February 7th financing, warrants that were issued as part of the November 2019 financing were repriced at $0.57. As a result of the issuance of common stock in February 2020 for less than the November 2019 warrant exercise price, a repricing of the warrants issued in the November 2019 financing was triggered. The Company recognized a one-time non-cash "deemed dividend" of $0.5 million, representing the increase in the fair value of the warrants. The non-cash "deemed dividend" was charged to additional paid in capital and included in net loss to stockholders. During February and March 2020, 2.3 million of the warrants issued in the November 2019 financing, with an exercise price of $0.57, were exercised for proceeds of approximately $1.3 million.

2019 Lincoln Park Transaction

On August 20, 2019, the Company entered into a purchase agreement (the "2019 Purchase Agreement") and a registration rights agreement (the "2019 Registration Rights Agreement") with Lincoln Park Capital Fund, LLC ("Lincoln Park"). Pursuant to the terms of the 2019 Purchase Agreement, Lincoln Park has agreed to purchase from us up to $15,000,000 of the Company's common stock (subject to certain limitations) from time to time during the term of the 2019 Purchase Agreement. Pursuant to the terms of the 2019 Registration Rights Agreement, the Company filed with the SEC a registration statement to register for resale under the Securities Act the shares that have been or may be issued to Lincoln Park under the 2019 Purchase Agreement.

Pursuant to the terms of the 2019 Purchase Agreement, at the time the Company signed the 2019 Purchase Agreement and the 2019 Registration Rights Agreement, the Company issued 35,529 shares of common stock to Lincoln Park as consideration for its commitment to purchase shares of our common stock under the 2019 Purchase Agreement. The commitment shares were valued at $200,000 and recorded as an addition to equity for the issuance of the common stock and treated as a reduction to equity as a cost of capital to be raised under the 2019 Purchase Agreement.

As a result of receiving stockholder approval on January 16, 2020, the Company may sell more than 19.9% of it's common stock outstanding pursuant to the 2019 Purchase Agreement without violating Nasdaq Marketplace Rules, including Rule 5635(d), requiring shareholder approval for the sale, issuance or potential issuance by an issuer of common stock (or securities convertible into or exercisable for common stock) at a price less than the greater of book or market value.

During the six months ended June 30, 2020, the Company sold an aggregate of approximately 464,471 shares of common stock under the 2019 Purchase Agreement, for gross proceeds of approximately $0.3 million.

December 2018 Financing

On December 7, 2018, the Company entered into an underwriting agreement with AGP and Dawson James Securities, Inc. (collectively, the "Underwriters") pursuant to which the Company sold securities consisting of 86,171 Class A Units at a public offering price of $35.00 per unit, with each unit consisting of one share of common stock and a warrant to purchase one share of common stock, and 11,984 Class B Units at a public offering price of $1,000 per unit, with each unit consisting of one share of Series A Convertible Preferred Stock, with a conversion price of $35.00 per share convertible into 28.5714 shares of common stock, and warrants to purchase 28.5714 shares of Common Stock. The warrants have an exercise price of $35.00, are immediately exercisable and expire five years from the date of issuance.

The Company also granted the Underwriters a 45-day option to purchase up to 64,286 shares of common stock and/or additional warrants to purchase up to 64,286 additional shares of common stock.

The December 2018 Financing closed on December 11, 2018. The Underwriters purchased the Class A and Class B Units at a seven-percent discount to the public offering price, for an aggregate discount of approximately $1.1 million (or $2.40 per share). The Company incurred other offering expenses of approximately $0.4 million. The Company received net proceeds from the December 2018 Financing of approximately $13.6 million, after deducting the underwriting discount and other offering expenses.

Additionally, the Underwriters fully exercised the over-allotment option related to the warrants and purchased additional warrants to acquire 64,000 shares of common stock for net proceeds of approximately $6,000.

On December 13, 2018, the Underwriters partially exercised the over-allotment option and purchased 25,000 shares of common stock for net proceeds of approximately $0.8 million, net of an aggregate discount of $0.1 million (or $2.40 per share).

After allocating proceeds to the warrants issued with the Series A convertible preferred stock, the effective conversion price of the Series A Convertible Preferred Stock, after the bifurcation of the warrants, was determined to be less than the fair value of the underlying common stock at the date of commitment, resulting in a BCF at that date. Since the Series A Preferred Stock has no stated maturity or redemption date and is immediately convertible at the option of the holder, the discount created by the BCF of $3.3 million, based on the intrinsic value, was charged to additional paid in capital as a "deemed dividend" and included in net loss to common stockholders.

During the first quarter of 2019, the remaining 9,856 shares of Series A Convertible Preferred Stock were converted into 281,610 shares of common stock.

2018 Lincoln Park Transaction

On October 18, 2018, the Company entered into a purchase agreement (the "2018 Purchase Agreement") and a registration rights agreement (the "2018 Registration Rights Agreement") with Lincoln Park. Pursuant to the terms of the 2018 Purchase Agreement, Lincoln Park has agreed to purchase from us up to $15,000,000 of the Company's common stock (subject to certain limitations) from time to time during the term of the 2018 Purchase Agreement. Pursuant to the terms of the 2018 Registration Rights Agreement, the Company filed with the SEC a registration statement to register for resale under the Securities Act the shares that have been or may be issued to Lincoln Park under the 2018 Purchase Agreement.

Pursuant to the terms of the 2018 Purchase Agreement, at the time the Company signed the 2018 Purchase Agreement and the 2018 Registration Rights Agreement, the Company issued 3,500 shares of common stock to Lincoln Park as consideration for its commitment to purchase shares of our common stock under the 2018 Purchase Agreement. The commitment shares were valued at $245,000 and recorded as an addition to equity for the issuance of the common stock and treated as a reduction to equity as a cost of capital to be raised under the 2018 Purchase Agreement.

During the six months ended June 30, 2019, the Company sold an aggregate of approximately 22,754 shares of common stock under the 2018 Purchase Agreement, for gross proceeds of approximately $0.4 million.

Under applicable rules of the NASDAQ Global Market, the Company could not issue or sell more than 19.99% of the shares of its common stock outstanding immediately prior to the execution of the 2018 Purchase Agreement (approximately 26,200 shares) to Lincoln Park under the 2018 Purchase Agreement without stockholder approval, unless the average price of all applicable sales of its common stock to Lincoln Park under the 2018 Purchase Agreement equals or exceeds a threshold amount. As the Company has issued approximately 26,200 shares to Lincoln Park, by June 30, 2019, under the 2018 Purchase Agreement at less than the threshold amount, the Company will not sell any additional shares under the 2018 Purchase Agreement without shareholder approval.

NOTE 9 – STOCK-BASED COMPENSATION

2019 Stock Incentive Plan

On May 3, 2019, the Company's stockholders approved the Tonix Pharmaceuticals Holding Corp. 2019 Stock Incentive Plan (the "2019 Plan"). The 2019 Plan provided for the issuance of up to 140,000 shares of common stock. With the adoption of the 2020 Plan (as defined below), no further grants may be made under the 2019 Plan.

2020 Stock Incentive Plan

On January 16, 2020, the Company's stockholders approved the Tonix Pharmaceuticals Holding Corp. 2020 Stock Incentive Plan (the "2020 Plan"). The 2020 Plan provided for the issuance of up to 600,000 shares of common stock. With the adoption of the Amended and Restated 2020 Plan (as defined below), no further grants may be made under the 2020 Plan.

Amended and Restated 2020 Stock Incentive Plan

On May 1, 2020, the Company's stockholders approved the Tonix Pharmaceuticals Holding Corp. Amended and Restated 2020 Stock Incentive Plan ("Amended and Restated 2020 Plan"), and together with the 2020 Plan and the 2019 Plan, the "Plans").

Under the terms of the Amended and Restated 2020 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 2020 Plan provides for the issuance of up to 10,000,000 shares of common stock, which amount will be increased to the extent that awards granted under the Amended and Restated 2020 Plan and the Plans are forfeited, expire or are settled for cash (except as otherwise provided in the Amended and Restated 2020 Plan). The Board of Directors determines the exercise price, vesting and expiration period of the grants under the 2020 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 expiration period of grants under the Amended and Restated 2020 Plan may not be more than ten years. As of June 30, 2020, 456,250 shares were available for future grants under the Amended and Restated 2020 Plan.

A summary of the stock option activity and related information for the Plans for the six months ended June 30, 2020 is as follows:

	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at December 31, 2019	109,036	$ 199.57	8.60	$ —
Grants	10,100,250	$ 0.81		
Exercised	—			
Forfeitures or expirations	—			
Outstanding at June 30, 2020	10,209,286	$ 2.93	9.76	$ 95,385
Exercisable at June 30, 2020	141,144	$ 135.08	4.97	$ 120

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 weighted average fair value of options granted during the three and six months ended June 2020 was $0.68 per share and $0.66 per share, respectively. The weighted average fair value of options granted during the three and six months ended June 2019 was $16.54 per share and $16.67 per share, respectively.

The Company measures the fair value of stock options on the date of grant, based on the Black Scholes 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. 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 issues options to directors which vest over a one-year period. The Company also issues performance-based options to executive officers, which vest when target parameters are met, and premium options which have an exercise price greater than the grant date fair value, subject in each case 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.

The assumptions used in the valuation of stock options granted during the six months ended June 30, 2020 and 2019 were as follows:

	Six Months Ended June 30, 2020	Six Months Ended June 30, 2019
Risk-free interest rate	0.36% to 1.25%	2.15% to 2.54%
Expected term of option	5.5 to 6 years	3.0 to 10.0 years
Expected stock price volatility	124.11% - 130.00%	107.12 -109.72%
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 the Company' historical stock price volatility.

Stock-based compensation expense relating to options granted of $0.7 million and $1.1 million was recognized for the three and six-month periods ended June 30, 2020, respectively, and $0.4 million and $0.7 million was recognized for the three and six-month periods ended June 30, 2019, respectively.

As of June 30, 2020, the Company had approximately $7.3 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 2.54 years.

2019 Employee Stock Purchase Plan

On May 3, 2019, the Company's stockholders approved the Tonix Pharmaceuticals Holdings Corp. 2019 Employee Stock Purchase Plan (the "2019 ESPP"). As a result of adoption of the 2020 ESPP, as defined below, by the stockholders, no further grants may be made under the 2019 ESPP Plan.

2020 Employee Stock Purchase Plan

On May 1, 2020, the Company's stockholders approved the Tonix Pharmaceuticals Holdings Corp. 2020 Employee Stock Purchase Plan (the "2020 ESPP").

The 2020 ESPP allows eligible employees to purchase up to an aggregate of 300,000 shares of the Company's common stock. Under the 2020 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 2020 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 2020 ESPP, subject to the statutory limit under the Code. As of June 30, 2020, 300,000 shares were available for future sales under the 2020 ESPP.

The 2019 ESPP is considered compensatory plan with the related compensation cost expensed over the six-month offering period. For the six months ended June 30, 2020 and 2019, $0 and $24,000, respectively were expensed. In January 2019, 177 shares that were purchased as of December 31, 2018, under the 2018 ESPP, were issued. Accordingly, during the quarter ended March 31, 2019, approximately $3,000 of employee payroll deductions accumulated at December 31, 2018, related to acquiring such shares, was transferred from accrued expenses to additional paid in capital. As of December 31, 2019, approximately $9,000 of employee payroll deductions, which were withheld since July 1, 2019, the commencement of the offering period ending December 31, 2019, were included in accrued expenses in the accompanying balance sheet. In January 2020, 1,578 shares that were purchased as of December 31, 2019, under the 2019 ESPP, were issued. Accordingly, during the six months ended June 30, 2020, approximately $2,000 of employee payroll deductions accumulated at December 31, 2019, related to acquiring such shares, was transferred from accrued expenses to additional paid in capital. The remaining $7,000 was returned to the employees.

NOTE 10 – STOCK WARRANTS

The following table summarizes information with respect to outstanding warrants to purchase common stock of the Company at June 30, 2020:

Exercise Price	Number Outstanding	Expiration Date
$ 0.57	2,500	November 2020
$ 0.57	2,344,198	November 2024
$ 0.57	2,341,026	February 2025
$ 35.00	490,571	December 2023
$ 630.00	5,441	October 2021
$ 687.50	474	October 2021
	5,184,210	

During the six months ended June 30, 2020, 2.3 million warrants from the November 2019 financing, with an exercise price of $0.57, were exercised for proceeds of approximately $1.3 million.

During the six months ended June 30, 2020, 10.8 million warrants from the February 7th financing, with an exercise price of $0.57, were exercised for proceeds of approximately $6.2 million.

During the six months ended June 30, 2019, 2,000 warrants with an exercise price of $35.00 were exercised for proceeds of approximately $70,000.

During the six months ended June 30, 2019, 24 warrants with an exercise price of $25,000 expired.

NOTE 11 – LEASES

The Company has various operating lease agreements, which are primarily for office space. These agreements frequently include one or more renewal options and require the Company to pay for utilities, taxes, insurance and maintenance expense. No lease agreement imposes a restriction on the Company's ability to engage in financing transactions or enter into further lease agreements. At June 30, 2020, the Company has right-of-use assets of $0.4 million and a total lease liability for operating leases of $0.4 million of which $0.1 million is included in long-term lease liabilities and $0.3 million is included in current lease liabilities.

At June 30, 2020, future minimum lease payments for operating leases with non-cancelable terms of more than one year were as follows (in thousands):

Year Ending December 31,	
Remainder of 2020	$ 221
2021	178
2022	37
2023	13
Included interest	(8)
	$ 441

In January 2019, the Company entered into a new operating lease, resulting in the Company recognizing an operating lease liability of approximately $0.4 million based on the present value of the future minimum rental payments. The Company also recognized corresponding ROU assets of approximately $0.4 million. In April 2019, the Company entered into a lease amendment, resulting in the Company recognizing an additional operating lease liability of approximately $0.1 million based on the present value of the future minimum rental payments. The Company also recognized a corresponding increase to ROU assets of approximately $0.1 million.

In February 2020, the Company entered into a lease amendment, resulting in the Company recognizing an additional operating lease liability of approximately $35,000 based on the present value of the minimum rental payments. The Company also recognized a corresponding increase to ROU assets of approximately $35,000. In April 2020, the Company entered into a new operating lease, resulting in the Company recognizing an operating lease liability of approximately $71,000 based on the present value of the future minimum rental payments. The Company also recognized corresponding ROU assets of approximately $71,000.

In June 2020, the Company entered into a new operating lease, resulting in the Company recognizing an operating lease liability of approximately $35,000 based on the present value of the future minimum rental payments. The Company also recognized corresponding ROU assets of approximately $35,000. In June 2020, the Company entered into lease amendments, resulting in the Company recognizing an additional operating lease liability of approximately $167,000 based on the present value of the future minimum rental payments. The Company also recognized a corresponding increase to ROU assets of approximately $167,000. Operating lease expense was $0.1 million and $0.2 million for the three and six months ended June 30 for both reporting periods.

Other information related to leases is as follows:

Cash paid for amounts included in the measurement of lease liabilities:	Six Months Ended June 30, 2020	Six Months Ended June 30, 2019
Operating cash flow from operating leases (in thousands)	$ 233	$ 221
Weighted Average Remaining Lease Term		
Operating leases	1.43 years	1.77 years
Weighted Average Discount Rate		
Operating leases	2.44%	3.36%

NOTE 12 – COMMITMENTS

Research and development contracts

The Company has entered into contracts with various contract research organizations with outstanding commitments aggregating approximately $19.8 million at June 30, 2020 for future work to be performed.

Defined contribution plan

The Company has 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 six 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. The Company charged operations $29,000 and $79,000 for the three and six months ended June 30, 2020, respectively, and $19,000 and $65,000 for the three and six months ended June 30, 2019, respectively, for contributions under the 401(k) Plan.

NOTE 13 – SUBSEQUENT EVENTS

On July 7, the Company announced that it entered into a $4 million non-binding Purchase and Sales Agreement in connection with asetting up a Massachusetts R&D facility to accelerate clinical development of vaccines and protein-based therapeutics.

On July 13, 2020, the Company entered into an underwriting agreement ("the July 2020 Financing") with AGP, relating to the issuance and sale of 20,940,000 shares of common stock, in a registered direct public offering. The public offering price for each share of common stock was $0.50. The July 2020 Financing closed on July 15, 2020. AGP purchased the shares at a seven percent discount, for an aggregate discount of $0.7 million. The Company expects to incur other offering expenses of approximately $0.2 million. The Company expects to receive net proceeds of approximately $9.6 million, after deducting the underwriting discount and other offering expenses.

On July 13, the Company entered into a research and exclusive license option Agreement with Kansas State University to develop TNX-2300 as a vaccine to protect against COVID-19.

On July 16, 2020, the Company announced a research collaboration and option agreement with Columbia University to develop precision medicine techniques for COVID-19 vaccines and therapeutics.

On July 29, 2020, Tonix engaged Premier Research International to initiate a new $10.3 million Phase 3 trial, F306 or Rally study, to study TNX-102 SL for the management of fibromyalgia. Tonix expects enrollment to begin in the third quarter of this year. The trial design will be very similar to the ongoing Phase 3 RELIEF study. The FDA requires two registration-quality clinical studies to support marketing approval.

Subsequent to the quarter ended June 30, 2020, the Company raised approximately $2.4 million through warrant exercises.

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: the COVID-19 pandemic, including its impact on the Company, 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 clinical-stage biopharmaceutical company focused on discovering, licensing, acquiring, developing and manufacturing small molecules and biologics to treat and prevent human disease and alleviate suffering. The immunology portfolio includes vaccines to prevent infectious diseases and biologics to address immunosuppression, cancer and autoimmune diseases. The CNS portfolio includes both small molecules and biologics to treat pain, neurologic, psychiatric and addiction conditions. In Q1 2020, we announced a program to develop a potential vaccine, TNX-1800, to protect against the novel coronavirus disease which emerged in 2019, or COVID-19. TNX-1800 is a live replicating vaccine based on the horsepox viral vector platform to protect against COVID-19, primarily by eliciting a T cell response. In Q2 2020, we announced a program to test and develop three additional potential vaccines, TNX-1810, TNX-1820 and TNX-1830 to protect against COVID-19. TNX-1800 is designed to elicit predominantly T cell responses and TNX-1810, TNX-1820 and TNX-1830 are designed to elicit almost pure T cell responses, based on technology licensed from the University of Alberta. In Q2 2020, we announced the manufacturing partner for TNX-1800 is Fujifilm Diosynth Biotechnologies. We are also developing TNX-2300, a second live replicating vaccine candidate for the prevention of COVID-19, but using bovine parainfluenza as the vector, based on technology from Kansas State University for which Tonix has an exclusive license option agreement. Tonix's lead CNS candidate, TNX-102 SL, is a sublingual formulation of cyclobenzaprine designed for daily dosing at bedtime. TNX-102 SL is in Phase 3 development with the goal of providing a safe and effective long-term treatment for fibromyalgia, or FM. FM is a pain disorder characterized by chronic widespread pain, non-restorative sleep, fatigue and impaired cognition. FM is associated with chronic disability, inadequate treatment options, high utilization of healthcare services, and significant economic burden. TNX-102 SL is also being developed for the treatment of agitation in Alzheimer's disease (AAD) and alcohol use disorder (AUD), both of which are in Phase 2-ready stages. Finally, our product pipeline includes other clinical stage and pre-clinical stage programs.

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Current Operating Trends

Our current research and development efforts are focused on developing TNX-1800, TNX-1810, TNX-1820, TNX-1830 and TNX-2300 as potential vaccines to protect against COVID-19, TNX-801 as a potential smallpox and monkeypox vaccine, and TNX-102 SL for the treatment of FM. We also plan to develop TNX-102 SL for AAD and AUD. Additionally, we plan to expend efforts and resources to develop our other pipeline programs, primarily related to TNX-1300 for cocaine intoxication, TNX-601 for depression, TNX-701 for radioprotection, TNX-1500 for organ transplant rejection/autoimmune conditions, TNX-1600 for daytime treatment for posttraumatic stress disorder, depression and attention deficit hyperactivity disorder, TNX-1700 for gastric and pancreatic cancers and TNX-1900 for migraine and craniofacial pain. In addition, we will continue to opportunistically discover, license or acquire therapeutics or capabilities that diversify our pipeline or that strengthen our ability to develop therapeutics. 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 study 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 most 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. These expenditures are subject to numerous uncertainties relating to timing and cost to completion. We test compounds in numerous preclinical studies for safety, toxicity and efficacy. At the appropriate time, subject to the approval of regulatory authorities, we expect to conduct 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 the global COVID-19 pandemic, 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 June 30, 2020 Compared to Three Months Ended June 30, 2019

Research and Development Expenses. Research and development expenses for the three months ended June 30, 2020 were $10.6 million, an increase of $7.0 million, or 194%, from $3.6 million for the three months ended June 30, 2019. This increase is predominately due to the acquisition of the Trigemina asset for $2.4 million, timing of development milestones related to the FM RELIEF study in 2020; increased activities developing TNX-1800 and TNX-801 and increased spending related to our development pipeline.

General and Administrative Expenses. General and administrative expenses for the three months ended June 30, 2020 were $3.6 million, an increase of $1.2 million, or 50%, from $2.4 million incurred in the three months ended June 30, 2019. The increase in primarily due to an increase in legal fees of $0.6 million due to increased patent prosecution costs, an increase in accounting fees of $0.1 million, an increase in financial reporting expenses of $0.2 million and an increase non-cash compensation expense of $0.2 million.

Net Loss. As a result of the forgoing, the net loss for the three months ended June 30, 2020 was $14.2 million, compared to a net loss of $5.8 million for the three months ended June 30, 2019.

Six Months Ended June 30, 2020 Compared to Six Months Ended June 30, 2019

Research and Development Expenses. Research and development expenses for the six months ended June 30, 2020 were $15.3 million, an increase of $7.8 million, or 104%, from $7.5 million for the six months ended June 30, 2019. This increase is predominately due to the acquisition of the Trigemina asset for $2.4 million, timing of development milestones related to the FM RELIEF study in 2020; increased activities developing TNX-1800 and TNX-801 and increased spending related to our development pipeline.

General and Administrative Expenses. General and administrative expenses for the six months ended June 30, 2020 were $6.2 million, an increase of $1.4 million, or 29%, from $4.8 million incurred in the six months ended June 30, 2019. The increase in primarily due to an increase in legal fees of $0.7 million due to increased patent prosecution costs, increase in insurance premiums of $0.1 million and an increase non-cash compensation expense of $0.2 million.

Net Loss. As a result of the foregoing, the net loss for the six months ended June 30, 2020 was $21.5 million, compared to a net loss of $12.1 million for the six months ended June 30, 2019.

License Agreements

On September 16, 2019, we entered into an exclusive License Agreement (the "Columbia License Agreement") with the Trustees of Columbia University in the City of New York ("Columbia") pursuant to which Columbia granted to us an exclusive license, with the right to sublicense, certain patents and technical information (collectively, the "TFF2 Technology") related to a recombinant Trefoil Family Factor 2 (TFF2), and to develop and commercialize products thereunder (each, a "TFF2 Product"). Pursuant to the terms of the Columbia License Agreement, Columbia has reserved for itself the right to practice the TFF2 Technology for academic research and educational purposes.

We paid a five-digit license fee to Columbia as consideration for entering into the Columbia License Agreement, which was recorded to non-clinical expenses in the statement of operations for the year ended December 31, 2019. We are obligated to use Commercially Reasonable Efforts, as defined in the Columbia License Agreement, to develop and commercialize the TFF2 Product, and to achieve specified developmental milestones.

We have agreed to pay Columbia single-digit royalties on net sales of (i) TFF2 Products sold by us or a sublicensee and (ii) any other products that involve material or technical information related to the TFF2 Product and transferred to us pursuant to the License Agreement ("Other Products") sold by us or a sublicensee. Royalties on each particular TFF2 Product are payable on a country-by-country and Product-by-Product basis until the latest of (i) the date of expiration of the last valid claim in the last to expire of the issued patents covered by the Columbia License Agreement, and (ii) a specified period of time after the first commercial sale of a TFF2 Product in the country in question. Royalties on each particular Other Product are payable on a country-by-country and product-by-product basis until a specified period of time after the first commercial sale of such particular Other Product in such country. Royalties payable on net sales of the TFF2 Product and Other Products may be reduced by 50% of the royalties payable by us to any third party for intellectual property rights which are necessary for the practice of the rights licensed to us under the Columbia License Agreement, provided that the royalty payable on a TFF2 Product or Other Product may not be reduced by more than 50%.

We are also obligated to make contingent milestone payments to Columbia totaling $4.1 million on a Product-by-Product basis upon the achievement of certain development, approval and sales milestones related to a TFF2 Product. In addition, we shall pay Columbia 5% of consideration, other than royalty payments and certain other categories of consideration, payable to us by a sublicensee. As of June 30, 2020, no milestone payments have been accrued or paid in relation to this agreement.

On May 20, 2019, we entered into an exclusive License Agreement (the "License Agreement") with Columbia pursuant to which Columbia, for itself and on behalf of the University of Kentucky and the University of Michigan (collectively, the "Institutions") granted to us an exclusive license, with the right to sublicense, certain patents, technical information and material (collectively, the "Technology") related to a double-mutant cocaine esterase, and to develop and commercialize products thereunder (each, a "Product"). Pursuant to the terms of the License Agreement, Columbia has reserved for itself and the Institutions the right to practice the Technology for academic research and educational purposes.

We agreed to pay a six-digit license fee to Columbia as consideration for entering into the License Agreement. We are obligated to use Commercially Reasonable Efforts, as defined in the License Agreement, to develop and commercialize the Product, and to achieve specified developmental milestones. The first 50% of the license fee was paid by June 30, 2019, while the remaining 50% license fee, was paid during the second quarter of 2020. Both installments of the license fee were recorded to research and development expenses in the statement of operations for the year ended December 31, 2019.

We agreed to pay Columbia single-digit royalties on net sales of (i) Products sold by us or a sublicensee and (ii) any other products that involve material or technical information related to the Product and transferred to us pursuant to the License Agreement ("Other Products") sold by us or a sublicensee. Royalties on each particular Product are payable on a country-by-country and Product-by-Product basis until the latest of (i) the date of expiration of the last valid claim in the last to expire of the issued patents covered by the License Agreement, (ii) a specified period of time after the first commercial sale of a Product in the country in question, or (iii) expiration of any market exclusivity period granted by a regulatory agency. Royalties on each particular Other Product are payable on a country-by-country and product-by-product basis until the later of (i) a specified period of time after the first commercial sale of such particular Other Product in such country or (ii) expiration of any market exclusivity period granted by a regulatory agency. Royalties payable on net sales of the Product and Other Products may be reduced by 50% of the royalties payable by us to any third party for intellectual property rights which are necessary for the practice of the rights licensed to us under the License Agreement, provided that the royalty payable on a Product or Other Product may not be reduced by more than 50%.

We are also obligated to make contingent milestone payments to Columbia totaling $3 million on a Product-by-Product basis upon the achievement of certain development, approval and sales milestones related to a Product. In addition, we shall pay Columbia 5% of consideration, other than royalty payments and certain other categories of consideration, payable to us by a sublicensee. As of June 30, 2020, no milestone payments have been accrued or paid in relation to this agreement.

On June 11, 2020, we entered into an asset purchase agreement (the "Asset Purchase Agreement") with Trigemina, Inc. ("Trigemina") and certain shareholders named therein (the "Executive Shareholders") pursuant to which we acquired Trigemina assets related to migraine and pain treatment technologies (the "Assets"). In connection with the acquisition of the Assets, we assumed Trigemina's rights and obligations under that certain Amended and Restated Exclusive License Agreement, dated November 30, 2007, as amended, by and between Trigemina and The Board of Trustees of the Leland Stanford Junior University ("Stanford") (the "License "Agreement") pursuant to an Assignment and Assumption Agreement with Stanford ("Assignment and Assumption Agreement"), dated June 11, 2020. As consideration for entering into the Asset Purchase Agreement, we have agreed to pay $824,759 to Trigemina and issued to Trigemina 2,000,000 shares of our common stock, par value $0.001 per share (the "Common Stock"),, and valued at $0.68 per share, based on the closing stock price on June 11th and has agreed to pay to Stanford $250,241 pursuant to the terms of the Assignment and Assumption Agreement. The Common Stock is unregistered and subject to a 12 month lock-up and a Shareholder Voting Agreement, dated June 11, 2020 (the "Voting Agreement"), pursuant to which Trigemina and the Executive Shareholders have agreed to vote the Common Stock on any matter put to a vote of our shareholders in accordance with management's recommendations. Both the costs associated with the cash payments and share issuance, were recorded to research and development in the statement of operations for the six months ended June 30, 2020. Because the Trigemina intellectual property was acquired prior to FDA approval, the cash and stock consideration was expensed as research and development costs since there is no alternative future use and the acquired intellectual property does not constitute a business.

Pursuant to the terms of the Assignment and Assumption Agreement, Stanford has granted us an exclusive license, with the right to sublicense, certain patents related to the Assets. Stanford has reserved for itself the right to practice under the patents for academic research and educational purposes. We are obligated to use commercially reasonable efforts to diligently develop, manufacture, and sell products claimed or covered by the patent and will use commercially reasonable efforts to diligently develop markets for such products. The License Agreement specifies developmental milestones and the period of time during which such milestones must be completed, and provides for an annual maintenance fee payable to Stanford.

As of June 30, 2020, no milestone payments have been accrued or paid in relation to this agreement.

On August 19, 2019, we entered into an asset purchase agreement (the "TRImaran Asset Purchase Agreement") with TRImaran Pharma, Inc. ("TRImaran") and the selling shareholders named therein (the "Selling Shareholders") pursuant to which we acquired TRImaran's assets related to certain pyran-based compounds (the "Assets"). In connection with the acquisition of the Assets, we entered into a First Amended and Restated Exclusive License Agreement (the "WSU License Agreement") with Wayne State University ("WSU") on August 19, 2019. As consideration for entering into the TRImaran Asset Purchase Agreement, we paid $100,000 to TRImaran and have assumed certain liabilities of TRImaran totaling $68,500. Upon the achievement of specified development, regulatory and sales milestones, we also agreed to pay TRImaran and the Selling Shareholders, in restricted stock or cash, at our option, a total of approximately $3.4 million. As of June 30, 2020, no milestone payments have been accrued or paid in relation to this agreement.

Pursuant to the terms of the WSU License Agreement, WSU has granted us an exclusive license, with the right to sublicense, certain patents, technical information and material (collectively, the "Technology") related to the Assets. WSU has reserved for itself the right to practice the Technology for academic research and educational purposes. We are obligated to use commercially reasonable efforts to obtain regulatory approval for one or more products utilizing the Technology ("WSU Products") and to use commercially reasonable marketing efforts throughout the term of the WSU License Agreement. The WSU License Agreement specifies developmental milestones and the period of time during which such milestones must be completed and provides for an annual maintenance fee payable to WSU. We are obligated to substantially manufacture WSU Products in the United States if WSU Products will be sold in the United States.

Pursuant to the WSU License Agreement, we have agreed to pay $75,000 to WSU as reimbursement of certain patent expenses, and, upon the achievement of specified development, regulatory and sales milestones, we also agreed to pay WSU, milestone payments totaling approximately $3.4 million. We have also agreed to pay WSU single-digit royalties on net sales of WSU Products sold by us or a sublicensee on a tiered basis based on net sales, and additional sublicense fees on certain consideration received from sublicensees. Royalties on each particular WSU Product are payable on a country-by-country and Product-by-Product basis until the date of expiration of the last valid claim in the last to expire of the issued patents covered by the WSU License Agreement. Royalties payable on net sales of WSU Products may be reduced by 50% of the royalties payable by us to any third party for intellectual property rights which are necessary for the practice of the rights licensed to us under the WSU License Agreement, provided that the royalty payable on a WSU Product may not be reduced by more than 50%. Each party also has the right to terminate the agreement for customary reasons such as material breach and bankruptcy. The WSU License Agreement contains provisions relating to termination, indemnification, confidentiality and other customary matters for an agreement of this kind. As of June 30, 2020, no milestone payments have been accrued or paid in relation to this agreement.

Liquidity and Capital Resources

As of June 30, 2020, we had working capital of $53.0 million, comprised primarily of cash and cash equivalents of $55.0 million and prepaid expenses and other of $2.6 million, offset by $3.2 million of accounts payable, $1.1 million of accrued expenses and current lease liabilities of $0.3 million. A significant portion of the accounts payable and accrued expenses are due to work performed in relation to our Phase 3 clinical trial in FM and TNX-1800. For the six months ended June, 2020 and 2019, we used approximately $19.4 million and $13.4 million of cash in operating activities, respectively, which represents cash outlays for research and development and general and administrative expenses in such periods. The increase in cash outlays principally resulted from an increase in research and development activities. For the six months ended June 30, 2020 and 2019, net proceeds from financing activities were $63.2 million and $0.5 million, respectively, predominately from the sale of our common stock and warrants.

Cash used by investing activities for the six months ended June 30, 2020 and 2019, was $14,000 and $10,000 respectively, related to the purchase of property and equipment.

We believe that our cash resources will be sufficient to meet our projected operating requirements through at least the end of 2020, but we do not have enough resources to meet our operating requirements for the one-year from the date of filing of this Form 10-Q.

We continue to face significant challenges and uncertainties and, as a result, our available capital resources may be consumed more rapidly than currently expected due to changes we may make in our research and development spending plans. These factors raise substantial doubt about our ability to continue as a going concern for the one year from the date of filing of this Form 10-Q. We have the ability to obtain additional funding through public or private financing or collaborative arrangements with strategic partners to increase the funds available to fund operations. However, we may not be able to raise capital with terms acceptable to us. Without additional funds, we may be forced to delay, scale back or eliminate some of our research and development activities, or other operations and potentially delay product development in an effort to provide sufficient funds to continue our operations. If any of these events occurs, our ability to achieve our development and commercialization goals would be adversely affected. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

In December 2019, a novel strain of Coronavirus (“COVID-19”) emerged that has caused significant disruptions to the U.S. and global economy. The spread of COVID-19 has led to regional quarantines, business shutdowns, labor shortages, disruptions to supply chains, and overall economic instability. Any of these events may have a material adverse effect on our business, operations and financial condition. The extent to which the Coronavirus impacts our operations will depend on future developments, which are highly uncertain and cannot be predicted with confidence, including the duration of the outbreak, new information that may emerge concerning the severity of COVID-19 and the actions taken to contain COVID-19 or treat its impact, among other things.

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 will not have enough resources to meet our operating requirements for the one-year from filing date of this report.

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.

Subsequent to the quarter ended June 30, 2020, the Company raised approximately $2.4 million through warrant exercises.

July 2020 Financing

On July 13, 2020, we entered into an underwriting agreement ("the July 2020 Financing") with AGP, relating to the issuance and sale of 20,940,000 shares of common stock, in a registered direct public offering. The public offering price for each share of common stock was $0.50. The July 2020 Financing closed on July 15, 2020. AGP purchased the shares at a seven percent discount, for an aggregate discount of $0.7 million. We expect to incur other offering expenses of approximately $0.3 million. We expect to receive net proceeds of approximately $9.5 million, after deducting the underwriting discount and other offering expenses.

2020 At-the-Market Offering

On April 8, 2020, we entered into a sales agreement (the "Sales Agreement"), with A.G.P/Alliance Global Partners ("AGP"), pursuant to which we may issue and sell, from time to time, shares of the our common stock having an aggregate offering price of up to $50.0 million in at-the-market offerings ("ATM") sales. On the same day, we filed a prospectus supplement under a shelf registration relating to the Sales Agreement. AGP will act as sales agent and will be paid a 3% commission on each sale under the Sales Agreement. Our common stock will be sold at prevailing market prices at the time of the sale, and, as a result, prices will vary. During the quarter ended June 30, 2020, we sold approximately 53.0 million shares of common stock under the Sales Agreement, for gross proceeds of approximately $35.3 million.

February 7th Financing

On February 7, 2020, we entered into an underwriting agreement ("the February 7th Financing") with AGP pursuant to which we sold securities consisting of 3,837,000 Class A Units at a public offering price of $0.57 per unit, with each unit consisting of one share of common stock and one warrant to purchase one share of common stock, and 5,313 Class B Units at a public offering price of $1,000 per unit, with each unit consisting of one share of Series B Convertible Preferred Stock, with a conversion price of $0.57 per share, convertible into 1,754.386 shares of common stock and warrants to purchase 1,754.386 shares of our common stock. The warrants have an exercise price of $0.57, are immediately exercisable and expire five years from the date of issuance.

The February 7th Financing closed on February 11, 2020. AGP purchased the Class A and Class B Units at a seven-percent discount to the public offering price, for an aggregate discount of approximately $0.5 million. We incurred other offering expenses of approximately $0.5 million. We received net proceeds of approximately $6.5 million, after deducting the underwriting discount and other offering expenses.

After allocating proceeds to the warrants issued with the Series B Convertible Preferred Stock, the effective conversion price of the Series B Convertible Preferred stock was determined to be less than the fair value of the underlying common stock at the date of commitment, resulting in a beneficial conversion feature ("BCF") at that date. Since the Series B Preferred Stock has no stated maturity or redemption date and is immediately convertible at the option of the holder, the discount created by the BCF of $1.3 million, based on intrinsic value, was charged to additional paid in capital as a non-cash "deemed dividend" and included in net loss to common stockholders.

During the first quarter of 2020, all 5,313 shares of Series B Convertible Preferred Stock were converted into common stock.

During February and March 2020, 10.8 million of the warrants issued in the February 7th financing, with an exercise price of $0.57, were exercised for proceeds of approximately $6.2 million.

February 28th Financing

On February 28, 2020, we entered into an underwriting agreement ("the February 28th Financing") with AGP, relating to the issuance and sale of 14,550,000 shares of our common stock, in a registered direct public offering. The public offering price for each share of common stock was $1.10. The February 28th Financing closed on March 3, 2020. AGP purchased the shares at a seven percent discount to the then current public price, for an aggregate discount of $1.1 million. We incurred other offering expenses of approximately $0.1 million. We received net proceeds of approximately $14.8 million, after deducting the underwriting discount and other offering expenses.

November 2019 Financing

On November 14, 2019, we entered into an underwriting agreement with AGP pursuant to which we sold securities consisting of 547,420 Class A Units at a public offering price of $1.94 per unit, with each unit consisting of one share of common stock, one warrant to purchase one share of common stock ("primary warrant") and one-half of one warrant to purchase one half of one share common stock ("common warrant"), and 7,938 Class B Units at a public offering price of $1,000 per unit, with each unit consisting of one share of Series A Convertible Preferred Stock, with a conversion price of $1.94 per share, convertible into 515.464 shares of common stock, primary warrants to purchase 515.464 shares of common stock, and common warrants to purchase 257.732 shares of our common stock. The primary warrants have an exercise price of $1.94, are immediately exercisable and expire five years from the date of issuance. The common warrants have an exercise price of $1.94, are exercisable and expire 12 months from the date of issuance. The common warrants are exercisable on a cashless basis at the option of the holder on the earlier of 30 days from issuance and the date by which an aggregate of $9.0 million of our securities were traded.

The November 2019 Financing closed on November 19, 2019. AGP purchased the Class A and Class B Units at a seven-percent discount to the public offering price, for an aggregate discount of approximately $0.6 million. We incurred other offering expenses of approximately $0.5 million. We received net proceeds from the November 2019 Financing of approximately $7.9 million, after deducting the underwriting discount and other offering expenses.

After allocating proceeds to the warrants issued with the Series A Convertible Preferred Stock, the effective conversion price of the Series A Convertible Preferred Stock was determined to be less than the fair value of the underlying common stock at the date of commitment, resulting in a BCF at that date. Since the Series A Preferred Stock has no stated maturity or redemption date and is immediately convertible at the option of the holder, the discount created by the BCF of $2.5 million, based on the intrinsic value, was charged to additional paid in capital as a non-cash "deemed dividend" and included in net loss to common stockholders.

As of December 31, 2019, all 7,938 shares of Series A Convertible Preferred Stock were converted into common stock.

With the February 7th financing, warrants that were issued as part of the November 2019 financing were repriced at $0.57. As a result of the issuance of common stock in February 2020 for less than the November 2019 warrant exercise price, a repricing of the warrants issued in the November 2019 financing was triggered. We recognized a one-time non-cash "deemed dividend" of $0.5 million, representing the increase in the fair value of the warrants. The non-cash "deemed dividend" was charged to additional paid in capital and included in net loss to stockholders. During February and March 2020, 2.3 million of the warrants issued in the November 2019 financing, with an exercise price of $0.57, were exercised for proceeds of approximately $1.3 million.

2019 Lincoln Park Transaction

On August 20, 2019, we entered into a purchase agreement (the "2019 Purchase Agreement") and a registration rights agreement (the "2019 Registration Rights Agreement") with Lincoln Park Capital Fund, LLC ("Lincoln Park"). Pursuant to the terms of the 2019 Purchase Agreement, Lincoln Park has agreed to purchase from us up to $15,000,000 of our common stock (subject to certain limitations) from time to time during the term of the 2019 Purchase Agreement. Pursuant to the terms of the 2019 Registration Rights Agreement, we filed with the SEC a registration statement to register for resale under the Securities Act the shares that have been or may be issued to Lincoln Park under the 2019 Purchase Agreement.

Pursuant to the terms of the 2019 Purchase Agreement, at the time we signed the 2019 Purchase Agreement and the 2019 Registration Rights Agreement, we issued 35,529 shares of common stock to Lincoln Park as consideration for its commitment to purchase shares of our common stock under the 2019 Purchase Agreement. The commitment shares were valued at $200,000 and recorded as an addition to equity for the issuance of the common stock and treated as a reduction to equity as a cost of capital to be raised under the 2019 Purchase Agreement.

As a result of receiving stockholder approval on January 16, 2020, we may sell more than 19.9% of its common stock outstanding pursuant to the 2019 Purchase Agreement without violating Nasdaq Marketplace Rules, including Rule 5635(d), requiring shareholder approval for the sale, issuance or potential issuance by an issuer of common stock (or securities convertible into or exercisable for common stock) at a price less than the greater of book or market value.

During the six months ended June 30, 2020, we sold an aggregate of approximately 464,471 shares of common stock under the 2019 Purchase Agreement, for gross proceeds of approximately $0.3 million.

2018 Lincoln Park Transaction

On October 18, 2018, we entered into a purchase agreement (the "2018 Purchase Agreement") and a registration rights agreement (the "2018 Registration Rights Agreement") with Lincoln Park. Pursuant to the terms of the 2018 Purchase Agreement, Lincoln Park has agreed to purchase from us up to $15,000,000 of our common stock (subject to certain limitations) from time to time during the term of the 2018 Purchase Agreement. Pursuant to the terms of the 2018 Registration Rights Agreement, we filed with the SEC a registration statement to register for resale under the Securities Act the shares that have been or may be issued to Lincoln Park under the 2018 Purchase Agreement.

Pursuant to the terms of the 2018 Purchase Agreement, at the time we signed the 2018 Purchase Agreement and the 2018 Registration Rights Agreement, we issued 3,500 shares of common stock to Lincoln Park as consideration for its commitment to purchase shares of our common stock under the 2018 Purchase Agreement. The commitment shares were valued at $245,000 and recorded as an addition to equity for the issuance of the common stock and treated as a reduction to equity as a cost of capital to be raised under the 2018 Purchase Agreement.

During the six months ended June 30, 2019, we sold an aggregate of approximately 22,754 shares of common stock under the 2018 Purchase Agreement, for gross proceeds of approximately $0.4 million.

Under applicable rules of the NASDAQ Global Market, we could not issue or sell more than 19.99% of the shares of its common stock outstanding immediately prior to the execution of the 2018 Purchase Agreement (approximately 26,200 shares) to Lincoln Park under the 2018 Purchase Agreement without stockholder approval, unless the average price of all applicable sales of its common stock to Lincoln Park under the 2018 Purchase Agreement equals or exceeds a threshold amount. As we have issued approximately 26,200 shares to Lincoln Park, by June 30, 2019, under the 2018 Purchase Agreement at less than the threshold amount, we will not sell any additional shares under the 2018 Purchase Agreement without shareholder approval.

Stock Compensation

2019 Stock Incentive Plan

On May 3, 2019, our stockholders approved the Tonix Pharmaceuticals Holding Corp. 2019 Stock Incentive Plan (the "2019 Plan"). The 2019 Plan provided for the issuance of up to 140,000 shares of common stock. With the adoption of the 2020 Plan (as defined below), no further grants may be made under the 2019 Plan.

2020 Stock Incentive Plan

On January 16, 2020, our stockholders approved the Tonix Pharmaceuticals Holding Corp. 2020 Stock Incentive Plan (the "2020 Plan"). The 2020 Plan provided for the issuance of up to 600,000 shares of common stock. With the adoption of the Amended and Restated 2020 Plan (as defined below), no further grants may be made under the 2020 Plan.

Amended and Restated 2020 Stock Incentive Plan

On May 1, 2020, our stockholders approved the Tonix Pharmaceuticals Holding Corp. Amended and Restated 2020 Stock Incentive Plan ("Amended and Restated 2020 Plan"), and together with the 2020 Plan and the 2019 Plan, the "Plans").

Under the terms of the Amended and Restated 2020 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 2020 Plan provides for the issuance of up to 10,000,000 shares of common stock, which amount will be increased to the extent that awards granted under the Amended and Restated 2020 Plan and the Plans are forfeited, expire or are settled for cash (except as otherwise provided in the Amended and Restated 2020 Plan). The Board of Directors determines the exercise price, vesting and expiration period of the grants under the 2020 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 expiration period of grants under the Amended and Restated 2020 Plan may not be more than ten years. As of June 30, 2020, 456,250 shares were available for future grants under the Amended and Restated 2020 Plan.

We measure the fair value of stock options on the date of grant, based on the Black Scholes option pricing model using certain assumptions discussed below, 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. 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 issue options to directors which vest over a one-year period. We also issue premium options to executive officers, which have an exercise price greater than the grant date fair value, 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.

The weighted average fair value of options granted during the three and six months ended June 2020 was $0.68 per share and $0.66 per share, respectively. The weighted average fair value of options granted during the three and six months ended June 2019 was $16.54 per share and $16.67 per share, respectively.

Stock-based compensation expense relating to options granted of $0.7 million and $1.1 million was recognized for the three and six-month periods ended June 30, 2020, respectively, and $0.4 million and $0.7 million was recognized for the three and six-month periods ended June 30, 2019, respectively.

As of June 30, 2020, we had approximately $7.3 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 2.54 years.

2019 Employee Stock Purchase Plan

On May 3, 2019, our stockholders approved the Tonix Pharmaceuticals Holdings Corp. 2019 Employee Stock Purchase Plan (the "2019 ESPP"). As a result of adoption of the 2020 ESPP, as defined below, by the stockholders, no further grants may be made under the 2019 ESPP Plan.

2020 Employee Stock Purchase Plan

On May 1, 2020, our stockholders approved the Tonix Pharmaceuticals Holdings Corp. 2020 Employee Stock Purchase Plan (the "2020 ESPP").

The 2020 ESPP allows eligible employees to purchase up to an aggregate of 300,000 shares of our common stock. Under the 2020 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 2020 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 2020 ESPP, subject to the statutory limit under the Code. As of June 30, 2020, 300,000 shares were available for future sales under the 2020 ESPP.

The 2019 ESPP is considered compensatory plan with the related compensation cost expensed over the six-month offering period. For the six months ended June 30, 2020 and 2019, $0 and $24,000, respectively were expensed. In January 2019, 177 shares that were purchased as of December 31, 2018, under the 2018 ESPP, were issued. Accordingly, during the quarter ended March 31, 2019, approximately $3,000 of employee payroll deductions accumulated at December 31, 2018, related to acquiring such shares, was transferred from accrued expenses to additional paid in capital. As of December 31, 2019, approximately $9,000 of employee payroll deductions, which were withheld since July 1, 2019, the commencement of the offering period ending December 31, 2019, were included in accrued expenses in the accompanying balance sheet. In January 2020, 1,578 shares that were purchased as of December 31, 2019, under the 2019 ESPP, were issued. Accordingly, during the six months ended June 30, 2020, approximately $2,000 of employee payroll deductions accumulated at December 31, 2019, related to acquiring such shares, was transferred from accrued expenses to additional paid in capital. The remaining $7,000 was returned to the employees.

Commitments

Research and development contracts

We have entered into contracts with various contract research organizations with outstanding commitments aggregating approximately $19.8 million at June 30, 2020 for future work to be performed.

Operating leases

As of June 30, 2020, future minimum lease payments are as follows (in thousands):

Year Ending December 31,	
Remainder of 2020	$ 221
2021	178
2022	37
2023	13
Included interest	(8)
	$ 441

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based on our condensed 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 condensed 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. In addition, for awards that vest immediately and are nonforfeitable, the measurement date is the date the award is issued.

*Accounting for sale of Class B Units in December 2018, November 2019 and February 2020 including beneficial conversion feature*In connection with the December 2018, November 2019 and February 2020 underwritten offerings, we issued warrants to purchase our common stock and convertible preferred stock. To account for the transaction, we calculated the relative fair value of each instrument issued in the financing. We also determined if a beneficial conversion feature existed. A beneficial conversion feature is defined as a nondetachable conversion feature that is in the money at the commitment date. A conversion feature is in the money if its conversion price is less than the current fair value of the share. For purposes of measuring a beneficial conversion feature, the effective conversion price should be based on the proceeds allocated to the convertible instrument.

We determined the fair value of the warrants to purchase common stock, using a Monte Carlo simulation, for the December 2018 and November 2019 financings, which is a statistical method used to generate a defined number of share price paths to develop a reasonable estimate of the range of future expected share prices. We determined the fair value of the warrants, using the black-scholes method, for the February 2020 warrants. Estimates and assumptions impacting the fair value measurement include the warrant's callable feature for the December 2018 offering, the number of shares for which the warrants are exercisable, remaining contractual term of the warrants, risk-free interest rate, expected dividend yield and expected volatility of the price of the underlying common shares. We estimate expected share volatility based on our historical volatility for a term equal to the contractual term of the warrants adjusted for a discount that a market participant would have taken when pricing the instrument. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve for time periods approximately equal to the remaining contractual term of the warrants. We estimated a 0% expected dividend yield based on the fact that we have never paid or declared dividends and do not intend to do so in the foreseeable future. In general, the assumptions used in calculating the fair value of the warrant represent management's best estimates, but the estimates involve inherent uncertainties and the application of management judgment. We determine the fair value of the convertible preferred stock utilizing the price of the common stock on the commitment date. We then allocated the relative fair value between the preferred shares and the warrants. Since the effective conversion price of the Preferred Stock is less than the fair value of the underlying common stock at the date of commitment, there is a beneficial conversion feature at the commitment date. Since the Preferred Stock has no stated maturity or redemption date and is immediately convertible at the option of the holder, the discount created by the beneficial conversion feature was charged to additional paid in capital as a "deemed dividend" and impacted earnings per share, reflected as an increase to loss to common stockholders.

Off-Balance Sheet Arrangements

Other than contractual obligations incurred in the normal course of business, we do not have any off-balance sheet financing arrangements or liabilities, guarantee contracts, retain or contingent interests in transferred assets or any obligation arising out of a material variable interest in an unconsolidated entity.

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 June 30, 2020, 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 June 30, 2020 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

On June 11, 2020, we issued 2,000,000 shares of common stock to Trigemina, Inc. in connection with the purchase of certain assets from Trigemina

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Item 6. Exhibits

10.01	Purchase and Sale Agreement, dated July 1, 2020. †
10.02	Asset Purchase Agreement, dated June 11, 2020, between the Company and Trigemina, Inc. †
10.03	Amended and Restated Exclusive License Agreement, dated June 11, 2020, between the Company and The Board of Trustees of the Leland Stanford Junior University
10.04	Assignment and Agreement, dated June 11, 2020, between the Company and The Board of Trustees of the Leland Stanford Junior University
31.01	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.
31.02	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.
32.01	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.
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

† Certain portions of this exhibit, that are not material and would likely cause competitive harm to the registrant if publicly disclosed, have been redacted pursuant to Item 601(b)(10) of Regulation S-K.

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: August 10, 2020

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

Date: August 10, 2020

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

Exhibit 10.1

CERTAIN IDENTIFIED INFORMATION HAS BEEN EXCLUDED FROM THIS EXHIBIT BECAUSE IT IS NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE REGISTRANT IF PUBLICLY DISCLOSED. THE OMISSIONS HAVE BEEN INDICATED BY "[***]."

PURCHASE AND SALE AGREEMENT

Agreement made this 1st day of July 2020.

1. PARTIES AND MAILING ADDRESSES: [***], a Massachusetts limited liability company with a mailing address of [***], hereinafter called the SELLER, agree to SELL and TONIX PHARMACEUTICALS HOLDING CORP., a New York corporation having a mailing address of 509 Madison Avenue, Suite 1608, New York, NY 10022, or its nominee/assignee, hereinafter called the BUYER, agrees to BUY, upon the terms hereinafter set forth, the following described premises:

2. DESCRIPTION: A commercial building consisting of approximately 40,000 square feet, more or less and lot of land presently known and numbered as [***], Massachusetts as being more fully described in the deed into the SELLER dated June 1, 2012 and recorded in the [***] Registry of Deeds (the "Premises").

3. BUILDINGS, STRUCTURES, IMPROVEMENTS, FIXTURES: Included in the sale as a part of said premises are the buildings, structures, and improvements now thereon, and the fixtures belonging to the SELLER and used in connection therewith including, if any, all wall-to-wall carpeting, drapery rods, venetian blinds, window shades, screens, screen doors, storm windows and doors, awnings, shutters, furnaces, heaters, heating equipment, stoves, ranges, oil and gas burners and fixtures appurtenant thereto, hot water heaters, plumbing and bathroom fixtures, garbage disposers, electric and other lighting fixtures, fences, gates, trees, shrubs, plants, air conditioning equipment, ventilators.

but excluding fixtures and equipment that belong to any of Seller's Tenants, as such term is hereinafter defined.

4. TITLE DEED: Said premises are to be conveyed by a good and sufficient quitclaim deed running to the BUYER, or to the nominee designated by the BUYER by written notice to the SELLER at least seven (7) days before the deed is to be delivered as herein provided, and said deed shall convey a good and clear record and marketable title thereto, free from encumbrances, except:

(a) Provisions of existing building and zoning laws;
(b) Intentionally omitted;
(c) Such taxes for the then current year as are not due and payable on the date of the delivery of such deed;
(d) Any liens for municipal betterments assessed after the date of this agreement;

(e) Easements, restrictions and reservations of record, if any, so long as the same do not prohibit or materially interfere with the current use of said premises;
(f)

5. AVAILABILITY OF TITLE INSURANCE. BUYER'S obligations hereunder are contingent upon the availability (at normal premium rates) of an owner's title insurance policy insuring the Premises without taking any exceptions other than the current printed exceptions contained in the ALTA form currently in use, commonly shown as Survey, Real Estate Taxes, (the latter of which shall only except real estate taxes not yet due and payable) and those exceptions set forth in Paragraph 4 above.

6. CONFORMITY. It is understood and agreed by the parties that the Premises shall not be in conformity with the title provisions of this Agreement unless:

(a) All buildings, structures and improvements, including but not limited to any driveways, shall be located completely within the boundary lines of said Premises and shall not encroach upon or under the property of any other person or entity, unless under recorded easement;
(b) No building, structure or improvement of any kind belonging to any other person or entity shall encroach upon or under said Premises, unless under recorded easement;
(c) The Premises shall abut a public way, duly laid out or accepted as such by the city or town in which said Premises are located, or a private way affording legal access and egress to and from a public way; and
(d) The Premises are served by adequate supplies of municipal sewer and water.

7. PURCHASE PRICE: The agreed purchase price for said premises is Four Million ($4,000,000) Dollars, (the "Purchase Price"), of which

$40,000.00	will be paid as a deposit withing five (5) business days of the Effective Date (the "Initial Deposit");
40,000.00	will be paid as a deposit withing two (2) business days after the expiration of the Due Diligence Period as hereinafter defined(the "Additional Deposit" and collectively with the Initial Deposit, the "Deposit");
3,920,000.00	are to be paid at the time of delivery of the deed by wire transfer of immediately available funds, Attorney IOLTA, certified, cashier's, treasurer's or bank checks(s).
$4,000,000.00	TOTAL

8. TIME FOR PERFORMANCE; DELIVERY OF DEED: Such deed is to be delivered at 10:00 o'clock A.M. on the day that is thirty (30) days after the expiration of the Permitting Contingency Period, as hereinafter defined (the "Closing" or the "Closing Date"), at the [***] Registry of Deeds, unless otherwise agreed upon by the SELLER and BUYER in writing; provided however, if said Registry of Deeds is closed to the public as it presently is, the SELLER shall arrange to deliver the original deed and required closing documents to the BUYER'S attorney's office, [***] on or prior to the Closing Date such that the closing can transpire via remote electronic closing. It is agreed that time is of the essence of this Agreement.

9. POSSESSION AND CONDITION OF PREMISES: Full possession of said Premises, subject only to Seller's Tenants is to be delivered on the Closing Date, said Premises to be then (a) in the same condition as they were in as of the date of the BUYER'S inspection, reasonable use and wear thereof excepted, (b) not in violation of applicable building and zoning laws, and (c) in compliance with the provisions of any instrument referred to in Paragraph 4 above. The BUYER shall be entitled to an inspection of the Premises prior to the delivery of the deed in order to determine whether the condition of the Premises complies with the terms of this paragraph. Within three (3) days following the Effective Date, SELLER shall deliver to BUYER (i) a so-called rent roll (the "Rent Roll") which shall contain a list of all of Seller's Tenants (collectively, "Seller's Tenants") as well as (ii) true, accurate and complete copies of any and all leases as well as any and all amendments or other written modifications thereto (collectively, the "Leases"). At the Closing, the parties shall execute (i) assignment and assumption agreements whereby the SELLER shall assign all of its rights and interest in and to the Leases to the BUYER and the BUYER shall assume all of SELLER'S obligations thereunder, (ii) notification letters to Seller's Tenants, notifying Seller's Tenants that the Premises have been conveyed to BUYER and directing Seller's Tenants, on or after the Closing, to make all payments of rent and to send any notices or other correspondence regarding their respective Leases to BUYER; and (iii) Tenant Estoppel Certificates from Seller's Tenants.

10. EXTENSION TO PERFECT TITLE OR MAKE PREMISES CONFORM: If the SELLER shall be unable to give title or to make conveyance, or to deliver possession of the Premises, all as herein stipulated, or if at the time of the delivery of the deed the Premises do not conform with the provisions hereof, then the SELLER shall use commercially reasonable efforts (not to exceed the expenditure by SELLER of more than $20,000 exclusive of the payoff of mortgages or other voluntary liens) to remove any defects in title, or to deliver possession as provided herein, or to make the said Premises conform to the provisions hereof, as the case may be, in which event the SELLER shall give written notice thereof to the BUYER at or before the time for performance hereunder, and thereupon the time for performance hereof shall be extended for a period of up to thirty (30) days.

11. FAILURE TO PERFECT TITLE OR MAKE PREMISES CONFORM: If at the expiration of the extended time the SELLER shall have failed so to remove any defects in title, deliver possession, or make the Premises conform, as the case may be, all as herein agreed, or if at any time during the period of this Agreement or any extension thereof, the holder of a mortgage on the Premises shall refuse to permit the insurance proceeds, if any, to be used for such purposes, then any payments made under this Agreement shall be forthwith refunded and all other obligations of the parties hereto shall cease and this Agreement shall be void without recourse to the parties hereto except for those matters which by the express terms hereof are intended to survive the Closing or early termination of this Agreement.

12. BUYER'S ELECTION TO ACCEPT TITLE: The BUYER shall have the election, at either the original or any extended time for performance, to accept such title as the SELLER can deliver to the Premises in their then condition and to pay therefor the Purchase Price without deduction, in which case the SELLER shall convey such title, except that in the event of such conveyance in accord with the provisions of this clause, if the Premises shall have been damaged by fire or casualty insured against, then the SELLER shall, unless the SELLER has previously restored the Premises to their former condition, either:

(a) pay over or assign to the BUYER, on delivery of the deed, all amounts recovered or recoverable on account of such insurance, less any amounts reasonably expended by the SELLER for any partial restoration, or

(b) if a holder of a mortgage on the Premises shall not permit the insurance proceeds or a part thereof to be used to restore the Premises to their former condition or to be so paid over or assigned, give to the BUYER a credit against the Purchase Price, on delivery of the deed, equal to said amounts so recovered or recoverable and retained by the holder of the said mortgage less any amounts reasonably expended by the SELLER for any partial restoration.

13. ACCEPTANCE OF DEED: The acceptance and recording of a deed by the BUYER or his nominee as the case may be, shall be deemed to be a full performance and discharge of every agreement and obligation herein contained or expressed, except such as are, by the terms hereof, to be performed after the delivery of said deed.

14. USE OF MONEY TO CLEAR TITLE: To enable the SELLER to make conveyance as herein provided, the SELLER may, at the time of delivery of the deed, use the purchase money or any portion thereof to clear the title of any or all encumbrances or interests, provided that all instruments so procured are recorded simultaneously with the delivery of said deed, or in the case of mortgages granted by the SELLER to institutional lenders which are paid in full from the sale proceeds within a reasonable time after the delivery of said deed in accordance with local conveyancing practices. The discharge of any privately held mortgages shall be required to be delivered and recorded at or prior to Closing.

15. INSURANCE: Until the recording of the deed, the SELLER shall maintain insurance on said premises as follows:

Type of Insurance	*Amount of Coverage*
(a) Fire and Extended Coverage	$As presently insured.
(b) General Commercial Liability Coverage	$As presently insured.

All risk of loss shall remain with SELLER until delivery and recording of the deed.

16. ADJUSTMENTS: Collected rents, water and sewer use charges, operative expenses and service contracts extending from the time of SELLER'S ownership to the time of BUYER'S ownership and taxes for the then current fiscal year, shall be apportioned as of the day of performance of this Agreement and the net amount thereof shall be added to or deducted from, as the case may be, the Purchase Price payable by the BUYER at the time of delivery of the deed. Fixed base rents and all additional rents, charges for utilities and all other rents (collectively, the "Rents") payable by Seller's Tenants, to the extent collected by SELLER on or prior to the Closing Date and which represent payments of Rents applicable to a period of time on or subsequent to the Closing Date, shall be prorated between SELLER and BUYER at the Closing. BUYER shall be credited at Closing with rent prepaid beyond the Closing Date or paid on account of operating costs, taxes or other items to be incurred after the Closing Date. BUYER shall pay SELLER upon its receipt by BUYER all Rents which are due and payable by Seller's Tenants on or prior to the Closing Date, but which have not been collected by SELLER on or prior to the Closing Date, or payment of which has been deferred until after the Closing Date (the "Arrearage Rents") which shall be prorated after Closing when collected by BUYER with the first collected rent applied to any Arrearage Rents.

17. ADJUSTMENT OF UNASSESSED AND ABATED TAXES: If the amount of said taxes is not known at the time of the delivery of the deed, they shall be apportioned on the basis of the taxes assessed for the preceding fiscal year, with a reapportionment as soon as the new tax rate and valuation can be ascertained; and, if the taxes which are to be apportioned shall thereafter be reduced by abatement, the amount of such abatement, less the reasonable cost of obtaining the same, shall be apportioned between the parties, provided that neither party shall be obligated to institute or prosecute proceedings for an abatement unless herein otherwise agreed.

18. BROKER'S FEE: A broker's fee for profession services of [***] of the Purchase Price, is due from the SELLER to CB RICHARD ELLIS the Broker herein, but only if as and when the SELLER receives the full Purchase Price pursuant to the terms of this Agreement and the BUYER accepts and records SELLER'S deed but not otherwise and regardless of the reason for failing to close hereunder. SELLER and BUYER each represent and warrant to the other that this transaction was brought about by the Broker, as broker, and that no other broker brought the BUYER to SELLER'S attention or was otherwise instrumental in bringing about this transaction on behalf of SELLER such that the only broker's fee that will be due hereunder is the broker's fee payable by the SELLER to said CB RICHARD ELLIS. SELLER and BUYER shall indemnify and hold each other harmless from a breach of the foregoing representation and warranty by either of them, respectively. The commissions due to the Broker will be paid by SELLER pursuant to a separate agreement with the Broker.

19. BROKER(S) WARRANTY: The Broker named herein warrants that the Broker is duly licensed as such by the Commonwealth of Massachusetts.

20. DEPOSIT: All deposits made hereunder shall be held in escrow by BUYER'S attorney, Downey & Downey, PC, as escrow agent (the "Escrow Agent") subject to the terms of this Agreement and shall be duly accounted for at the time for performance of this Agreement. In the event of any disagreement between the parties, the escrow agent shall retain all deposits made under this Agreement pending instructions mutually given by the SELLER and the BUYER or by the final non-appealable order of a court a court of competent jurisdiction. So long as Escrow Agent serves in good faith, BUYER and SELLER each agree to hold harmless Escrow Agent from damages, losses or expenses, arising out of this Agreement or any action or failure to act, including reasonable attorney's fees, related thereto. SELLER acknowledges that the Escrow Agent is counsel to the BUYER and SELLER agrees that Escrow Agent may continue to act as such counsel to the BUYER notwithstanding any dispute or litigation arising with respect to the deposits or Escrow Agent's duties.

21. DEFAULT; DAMAGES; REMEDIES: If the BUYER shall fail to fulfill the BUYER'S agreements herein and SELLER has fulfilled SELLER's agreements herein, all Deposits made hereunder by the BUYER shall be retained by the SELLER as liquidated damages which shall be SELLER'S sole and exclusive remedy both at law and in equity. The parties acknowledge that the SELLER has no adequate remedy at law in the event of BUYER'S failure to fulfill its obligations hereunder because it is impossible to compute exactly the damages that would accrue to the SELLER in such event. The parties have therefore taken these facts into account in setting the amount of the Deposit and hereby agree that: (a) the Deposit is the best estimate of such damages which would accrue to SELLER; and (b) the Deposit represents damages and not any penalty against the BUYER. If SELLER fails to perform its obligations hereunder, then SELLER will be in default under this Agreement and BUYER may either (i) enforce specific performance of this Agreement or (ii) terminate this Agreement and receive the return of the Deposit.

22. INDEPENDENT COUNSEL. Both BUYER and SELLER hereby acknowledge that they have been offered the opportunity to seek and confer with qualified legal counsel of their choice prior to signing this Agreement.

23. BROKER AS PARTY: The Broker named herein joins in this Agreement and becomes a party hereto, insofar as any provisions of this Agreement expressly apply to the Broker, and to any amendments or modifications of such provisions to which the Broker agrees in writing.

24. LIABILITY OF TRUSTEE, SHAREHOLDER, BENEFICIARY, ETC: If the SELLER or BUYER executes this agreement in a representative or fiduciary capacity, only the principal or the estate represented shall be bound, and neither the SELLER or BUYER so executing, nor any shareholder or beneficiary of any trust, shall be personally liable for any obligation, express or implied, hereunder.

25. WARRANTIES AND REPRESENTATIONS: The BUYER acknowledges that the BUYER has not been influenced to enter into this transaction nor has he relied upon any warranties or representations not set forth or incorporated in this agreement or previously made in writing, except for the following additional warranties and representations, if any, made by either the SELLER or the Broker(s): None made or relied upon.

26. MORTGAGE CONTINGENCY CLAUSE: Intentionally omitted.

27. CONSTRUCTION OF AGREEMENT: This instrument, executed in multiple counterparts, is to be construed as a Massachusetts contract, is to take effect as a sealed instrument, sets forth the entire contract between the parties, is binding upon and enures to the benefit of the parties hereto and their respective heirs, devisees, executors, administrators, successors and assigns, and may be canceled, modified or amended only by a written instrument executed by both the SELLER and the BUYER. The captions and marginal notes are used only as a matter of convenience and are not to be considered a part of this agreement or to be used in determining the intent of the parties to it. If any provisions of this Agreement are held to be illegal, invalid or unenforceable under present or future laws, such provision shall be fully severable, and this Agreement shall be construed and enforced as if such illegal, invalid or unenforceable provision had never comprised a part of this Agreement, and the remaining provisions of this Agreement shall remain in full force and effect and not be affected by the illegal, invalid or unenforceable provision or by its severance from this Agreement, provided that both parties may still effectively realize the complete benefit of the transaction contemplated hereby. The effective date (the "Effective Date") of this Agreement shall be the date of the last party's execution; provided, however, that if the last party does not execute this Agreement and deliver a fully executed counterpart of the same to the first signing party within five (5) days after the first party's execution date, then the offer or commitment to be bound hereby by the first executing party shall automatically be revoked and withdrawn, whereupon neither party shall be bound hereto. This Agreement may be freely assigned to a nominee as the BUYER may designate, specifically including but not limited to an affiliate of the BUYER.

28. AFFIDAVITS AND CERTIFICATES. At the time of delivery of SELLER'S deed, if requested, SELLER shall execute and deliver to BUYER the following documents: (a) an affidavit stating that SELLER is not a foreign person under Internal Revenue Code, Section 1445; (b) an affidavit to BUYER and BUYER'S title insurance company certifying that there are no parties in possession of the Premises, other than Seller's Tenants and that no work has been done on the Premises which would entitle anyone to claim a mechanic's or materialman's lien with respect to the Premises; (c) Internal Revenue Code, Section 1099S Forms and W–9 Forms; and (d) any affidavits, agreements and certificates customarily required by BUYER'S mortgagee, title insurance company and banks in connection with mortgage loans for transactions of this type. BUYER shall not be obligated to accept a deed signed under a power of attorney.

29. NOTICES. All notices required or permitted to be given hereunder shall be given hereunder shall be in writing and deemed duly given when (1) mailed by registered or certified, first-class mail, return receipt requested, postage prepaid, (2) hand delivered, (3) sent by facsimile with proof of delivery and transmission, (4) sent by recognized overnight delivery service or (5) sent via e-mail with proof of delivery and transmission, addressed as follows:

if to SELLER: [***]

if to BUYER to: [***]

30. REAL ESTATE BAR ASSOCIATION STANDARDS. Any matter or practice arising under or relating to this Agreement which is the subject of a title standard or a practice standard of the Real Estate Bar Association at the time for delivery of the deed shall be covered by said title standard or practice standard to the extent applicable.

31. ACCESS TO PREMISES. BUYER, BUYER'S agents and mortgagees shall have the right to reasonable access to the Premises, not to exceed three (3) visits plus BUYER'S final walk-through at all reasonable times upon prior forty-eight (48) hour notice to SELLER or SELLER'S agent; provided that SELLER shall have the option to accompany the BUYER and BUYER'S agents during any interior access of the building. BUYER agrees that any such access shall be at BUYER's sole risk and BUYER agrees to indemnify SELLER from any and all claims arising from third parties related to same.

32. MAINTENANCE OF PREMISES: Between the date hereof and the Closing, the SELLER shall maintain and service the Premises and its appurtenances at the same level of effort and expense as the SELLER has maintained or serviced the Premises for the SELLER'S own account prior to the date of this Agreement.

33. ATTORNEY AUTHORIZATION: In order to facilitate the execution and delivery of certain documents contemplated hereby, the BUYER grants to their attorneys the actual authority to execute and deliver on each BUYER'S behalf extensions thereby extending the time for performance hereunder or any notice that may be given under this agreement, and the SELLER may rely on the signature of such attorneys (including faxed signatures) unless the SELLER has actual knowledge that the BUYER has revoked the authority granted herein.

34. FACSIMILE OR SCANNED SIGNATURES: For purposes of this Agreement facsimile signatures and/or email or electronic signatures shall be treated as originals.

35. SELLER'S REPRESENTATIONS. SELLER warrants and represents to BUYER, to the best of SELLER'S knowledge, as follows:

(a) **Takings**. SELLER has no knowledge of nor has SELLER received any written notice of taking, condemnation or special assessment, actual or proposed, with respect to the Premises.

(b) **Authority**. SELLER has full right, power and authority to enter into and become bound by this Agreement and to consummate the transactions contemplated hereby; that any person other than SELLER executing this Agreement has been duly authorized by all necessary action and has full right, power and authority to execute and deliver this Agreement on behalf of SELLER.

(c) **Outstanding Agreements**. SELLER represents and warrants that the Premises are not the subject of any outstanding agreements with any party pursuant to which any such party may acquire any interest in the Premises, other than Seller's Tenants and mortgagees.

(d) **Litigation**. SELLER has no knowledge of any litigation or proceeding, pending or threatened, against or relating to the Premises.

(e) **Hazardous Substances.** SELLER represents and warrants to BUYER that, to SELLER'S actual knowledge and information, (i) there has been no release of any hazardous materials or oil on, from or near the Premises (as used in this Agreement, the terms "release", "hazardous materials" and "oil" shall have the meaning given to them in M.G.L. Chapter 21E) and (ii) there are no underground storage tanks or other subsurface facilities holding petroleum or oil products currently in use or previously abandoned on the Premises; notwithstanding anything herein to the contrary, the survival of the representations and warrantees that are made by the SELLER in this paragraph are specifically limited to releases of hazardous materials occurring prior to the Closing Date such that the SELLER shall have no liability for any releases of hazardous materials that occur after the Closing Date.

(f) **Rent Roll**. There are no leases, licenses, occupancy or related agreements or tenancies affecting the Premises except those that will be listed the rent roll (the "Rent Roll") which is to be prepared by the SELLER and delivered to the BUYER within three (3) days hereof, which Rent Roll shall be true, accurate and complete as of the date listed thereon.

(g) **Lease Status**. Each of the Leases and their Amendments are in full force and effect according to the terms set forth therein and, have not been modified, amended or altered except as disclosed on the Rent Roll or as disclosed in the copies of Leases and Amendments provided to BUYER by SELLER, which Lease and Amendment copies shall be true, accurate and complete copies, with any all written amendments or other written modifications attached thereto.

(h) **Tenant Offsets**. No tenant under a Lease has delivered written notice to SELLER asserting any offset, defense or claim against rent payable by it or other performance of obligations due from it under its Lease.

(i) **Tenant Defaults**. Except as set forth **in the Rent Roll**, SELLER has no knowledge of any default by any of the Seller's Tenants under any Lease, and none of Seller's Tenants are in arrears in the performance of any monetary obligation required of them under its Lease, except as reflected on the Rent Roll. SELLER is not aware of any facts or circumstances which with the passage of time and/or notice would constitute a default by any tenant under a Lease.

(j) **Broker Fees - Leases**. There are no written agreements with any real estate broker, leasing agent or other party (including, without limitation, the current manager of the Premises), that entitle or will entitle such real estate broker, agent or other party to any leasing or other brokerage commission or payment or finder's fee from BUYER. SELLER agrees to indemnify, defend and hold BUYER harmless from any claims for such brokerage commissions.

(k) **Tenant Deposits**. Any and all refundable security deposits, prepaid rent, key deposits and all other refundable deposits made by Seller's Tenants under the Leases shall be listed in **the Rent Roll** and shall be assigned or credited to BUYER (together with all interest thereon), as BUYER elects, at the Closing. The amount so credited to BUYER shall be considered an adjustment due to BUYER. No security deposits under any Lease have been or will be applied or refunded by SELLER other than to Tenants whose Lease term ends prior to the Closing or as set forth on the Rent Roll.

(l) **Service Contracts**. All service contracts related to the use, ownership or operation of the Premises are on at at-will basis and provided that the parties consummate the sale as contemplated by this Agreement, at BUYER'S option and upon notice from BUYER to SELLER, SELLER shall terminate such service contracts effective as of the Closing Date hereunder.

(m) **Default Notices**. SELLER has not received any written notice that it is in default under any of the covenants, easements or restrictions affecting or encumbering the Premises or any portion thereof.

(n) **Rights of First Refusal and Options.** No Lease or other Agreement affecting the Premises contains any rights of first refusal or options granted by SELLER to purchase the Premises or any portion thereof.

It shall be a condition of BUYER'S obligation to close under this Agreement that all representations made by the SELLER shall be true as of the Closing. Further, it shall be a condition of BUYER'S obligations hereunder that SELLER shall promptly notify BUYER of any material change in facts which arise prior to the Closing which would make any statement or representation contained herein untrue if such state of facts had existed on the date of execution of this Agreement. The representations contained above shall survive the delivery of the deed for a period of six (6) months from the date of the Closing.

36. CONFIDENTIALITY. Prior to delivery of the Deed as contemplated hereunder, each of the parties agrees to keep this transaction and the terms described herein strictly confidential and not to disclose any such information, with the exception of consultants and other professionals retained by either party, except as approved in writing by the other party or as required by law.

37. DUE DILIGENCE PERIOD: Within seven (7) days of the Effective Date, SELLER shall deliver to BUYER true and complete copies of all of the Leases as well as any and all site plans, building plans, permits and environmental reports with respect to the Premises. From and after the Effective Date for a period of sixty (60) days (the "Due Diligence Period"), BUYER, at BUYER'S sole cost and expense, and BUYER'S agents shall have the right to inspect the Premises with consultants of BUYER'S own choosing with the understanding that the BUYER and it's consultants, with reasonable prior notice to SELLER of not less than 48 hours, may enter the Premises at their sole risk, that they shall provide evidence of insurance at least 48 hours prior to such entry, which shall be acceptable to SELLER, in amounts approved by SELLER and naming SELLER as an additional insured, and BUYER shall leave the Premises in the same condition as it was in prior to such entry; provided that SELLER shall have the option to accompany the BUYER and BUYER'S agents during any interior access of the building. During such inspections, BUYER shall use reasonable efforts to avoid or minimize damage to the Premises as well as to avoid or minimize interference with SELLER'S and Seller's Tenant's use of the Premises. BUYER shall have the right to conduct test borings and other soil tests analyses and studies to determine the presence of hazardous waste at or around the Premises. If the results of any of the above inspections prove to be unsatisfactory or unacceptable to the BUYER for any reason or for no reason at all, the BUYER may terminate this Agreement on or prior to the expiration of the Due Diligence Period by written notice to the SELLER whereupon any Deposit made hereunder shall be forthwith refunded and all obligations of the parties hereto shall cease and this Agreement shall be void without further recourse available to either party either at law or in equity. If BUYER fails to terminate this Agreement as provided for herein, the Deposit shall be deemed nonrefundable.

38. PERMITTING CONTINGENCY: From and after the Effective Date for a period of sixty (60) days (the "Permitting Contingency Period"), BUYER shall at BUYER'S sole cost and expense, filing the necessary applications to obtain any and all permits, special permits, variances, licenses and/or approvals for BUYER'S proposed use of the Premises. SELLER agrees to cooperate fully with BUYER and shall execute as the owner of the Premises such applications and documents that may be reasonably required to obtain such permits, licenses and/or approvals. If despite BUYER'S diligent efforts, BUYER is unable to obtain all such permits, special permits, variances, licenses and/or approvals, the BUYER may terminate this Agreement on or prior to the expiration of the Permitting Contingency Period by written notice to the SELLER whereupon any Deposit made hereunder shall be forthwith refunded and all obligations of the parties hereto shall cease and this Agreement shall be void without further recourse available to either party either at law or in equity. Notwithstanding the foregoing to the contrary, if despite BUYER'S diligent efforts, the BUYER has not received such permits, special permits, variances, licenses and/or approvals, the BUYER upon written notice to the SELLER on or prior to the expiration of the Permitting Contingency Period, shall have the right to extend Permitting Contingency Period for an additional thirty (30) days. Furthermore, if despite BUYER'S diligent efforts, the BUYER has not received such permits, special permits, variances, licenses and/or approvals on or prior to the expiration of the Permitting Contingency Period, as the same may be extended, the BUYER may terminate this Agreement on or prior to the expiration of the Permitting Contingency Period, as the same may be extended, by written notice to the SELLER whereupon any Deposit made hereunder shall be forthwith refunded and all obligations of the parties hereto shall cease and this Agreement shall be void without further recourse available to either party either at law or in equity.

39. WEEKEND AND HOLIDAY EXTENSIONS: If the time period by which any right, option or election provided under this Agreement must be exercised, or by which any act required hereunder must be performed or by which the Closing must be held expires on a Saturday, Sunday, federal holiday or legal bank holiday in the state where the Premises are located, then such time period shall be automatically extended to the close of business on the next business day.

40. TITLE OBJECTIONS PERIOD: From and after the Effective Date for a period of thirty (30) days (the "Title Objections Period"), BUYER shall, at BUYER'S sole cost and expense, have a title examination completed and a Title Commitment (the "Commitment") issued and shall notify SELLER within said thirty (30) day period of any objections to title in writing. If BUYER objects to any title encumbrances disclosed in the Commitment, BUYER shall, within said Title Objections Period, notify SELLER in writing, specifying the objectionable title encumbrances (a "**Title Notice**"). If BUYER fails to timely give such notice specifying the objectionable title encumbrances, BUYER will be deemed to have approved the matters set forth in the Commitment, which shall be included in the "**Permitted Exceptions**." If BUYER timely gives such notice specifying objectionable title encumbrances, all matters set forth in the Commitment which are not objected to in BUYER'S notice will be included in the "**Permitted Exceptions**." SELLER shall use commercially reasonable efforts to cure any title matters within fourteen (14) days from receipt of the Title Notice (the "**Title Cure Period**"), in which event the Closing, if it otherwise is scheduled to occur earlier, shall be extended until the earlier of fourteen (14) days after receipt of the Title Notice or three (3) business days after such matter is cured. In the event that despite SELLER'S diligent and commercially reasonable efforts, SELLER fails to effectuate such cure within the Title Cure Period, BUYER shall have the right to terminate this Agreement in writing within seven (7) business days after the expiration of the Title Cure Period, in which event the Deposit shall be returned to BUYER. Notwithstanding the foregoing, SELLER agrees to cure (and remove) all liens and monetary encumbrances affecting title to the Premises arising by, through or under SELLER and BUYER shall have no obligation to make any objection thereto. Furthermore, BUYER may, prior to Closing, notify SELLER in writing (a "**Gap Notice**") of any title exceptions raised by the Title Insurer between the expiration of the Title Objection Period and Closing and not disclosed by the Title Insurer or otherwise actually known to BUYER prior to the expiration of the Title Objection Period; provided that BUYER must notify SELLER in writing of such unacceptable exceptions within three (3) business days of being made aware of the existence of such exceptions. If BUYER sends a Gap Notice to SELLER, BUYER and SELLER shall have the same rights and obligations with respect to such notice and the exceptions set forth therein as apply to a Title Notice and the exceptions set forth in this paragraph.

41. COVID 19: The Closing Date in Paragraph 8 of this Agreement shall be extended for an Excused Delay which materially affects the BUYER'S ability to close or some other such cause that prevents either party from fulfilling its obligations under the Agreement due to an Excused Delay, unless BUYER and SELLER mutually agree otherwise. As used herein an Excused Delay means a delay preventing the Closing to occur caused by an Act of God, declared state of emergency or public health emergency, pandemic (specifically including COVID-19), government mandated quarantine or travel ban, war, acts of terrorism, and/or order of government or civil or military authorities. The Closing Date shall expire at the earlier of ten (10) business days after the end of the Excused Delay or 30 days after the Closing Date.

NOTICE: This is a legal document that creates binding obligations. If not understood, consult an attorney.

SELLER:

[***]

By: _____
[***], Manager

BUYER:

Tonix Pharmaceuticals Holding Corp.

By: _____
Seth Lederman, MD, CEO

Exhibit 10.02

CERTAIN IDENTIFIED INFORMATION HAS BEEN EXCLUDED FROM THIS EXHIBIT BECAUSE IT IS NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE REGISTRANT IF PUBLICLY DISCLOSED. THE OMISSIONS HAVE BEEN INDICATED BY "[***]."

Execution Copy

ASSET PURCHASE AGREEMENT

This **ASSET PURCHASE AGREEMENT** ("**Agreement**"), dated June 11, 2020 (the "**Effective Date**"), is entered into by and among Trigemina Holdings, Inc., a Delaware corporation ("**Seller**"), Tonix Pharmaceuticals, Inc., a Delaware corporation ("**Buyer**") and, solely for the purposes of Section 6.1, each of the Executive Shareholders (as defined below).

Background

WHEREAS, Seller, together with its Affiliates, are the sole owner of the Purchased Assets (as defined below); and

WHEREAS, Seller desires to sell, transfer and assign to Buyer, and Buyer desires to acquire and assume from Seller, all of the Purchased Assets and Assumed Liabilities (as defined below), all as more specifically provided herein;

NOW, **THEREFORE**, in consideration of the foregoing and the representations, warranties, covenants and agreements contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:

ARTICLE 1
DEFINITIONS

Section 1.1 Definitions

All terms not defined below are as defined elsewhere in this Agreement.

"**Affiliate**" means any Person that directly or indirectly Controls, is Controlled by or is under common Control with another Person. A Person will be deemed to "**Control**" another Person if it has the power to direct or cause the direction of the other Person, whether through ownership of securities, by contract or otherwise.

"**Applicable Laws**" means, in respect of any Person, property, transaction, event or course of conduct, all applicable laws, statutes, regulations, rules, ordinances, regulatory policies, codes, guidelines, official directives, orders, rulings, judgments and decrees of any Governmental Authority.

"**Assignment and Assumption Agreement**" shall have the meaning in Section 6.10.

"**Assumed Liabilities**" means the Stanford License and any Liabilities of the Seller arising after the Closing Date under the Transferred Contracts.

"**Buyer Indemnified Parties**" shall have the meaning in Section 8.1.

"**Business Day**" means any day other than a Saturday, Sunday or other day on which banks in New York, New York, USA, are permitted or required to close by law or regulation.

"**Cap**" shall have the meaning in Section 8.3.

"**Cash Consideration**" shall have the meaning in Section 3.1.

"Closing" shall have the meaning in Section 3.4.

"Closing Date" shall have the meaning in Section 3.4.

"**Compounds**" means [***] and any and all other compounds owned, controlled or being developed by Seller.

"**Confidential Information**" shall have the meaning in Section 6.1(a).

"**Corporation**" shall have the meaning in Section 3.2.

"**Encumbrance**" means any mortgage, charge, lien, security interest, easement, right of way, pledge or encumbrance of any nature whatsoever.

"**Equity Consideration**" shall have the meaning in Section 3.1.

"**Excluded Liabilities**" means any and all Liabilities of Seller that are not expressly included in the definition of Assumed Liabilities, including, but not limited to:

(a) any and all Liabilities arising prior to or on the Closing Date under the Transferred Contracts;

(b) any and all Liabilities of Seller with respect to taxes;

(c) any and all Liabilities arising out of or otherwise relating to the employment or service of any Person, including Seller's officers and directors, by Seller;

(d) any and all Liabilities of Seller under this Agreement or incurred in connection with the negotiation or consummation of this Agreement; and

(e) any and all Liabilities of the Seller arising out of events, transactions, facts, acts or omissions which occurred prior to or on the Closing Date.

"**Executive Shareholders**" means each of Michael C. Scaife, Ph.D., Taylor Rooke and Dr. Shashidhar Kori.

"**FDA**" means the United States Food and Drug Administration or any successor agency performing similar functions.

"**Fundamental Representations"** shall have the meaning in Section 8.3.

"**Governmental Authority**" means any court, governmental agency, department or commission or other governmental authority or instrumentality, including, but not limited to, the FDA.

"**Indemnified Party**" shall have the meaning in Section 8.6(a).

"**Indemnifying Party**" shall have the meaning in Section 8.6(a).

"**Intellectual Property Rights**" means all right, title and interest of Seller in and to (a) the Patents, (b) the Trademarks, (c) the Know-How, (d) the Technical Information and (e) any copyrights and other intellectual property related to any of the foregoing, the Compounds, the Products, or the Nasal Delivery Technology.

"**Know-How**" means any of Seller's know-how, show-how, technical and non-technical information, trade secrets, formulae, techniques, sketches, drawings, materials, models, inventions, designs, specifications, processes, apparatus, equipment, databases, research, experimental work, development, pharmacology and clinical data, software programs and applications, software source documents, third-party licenses, in each case, related to the Compounds, the Products, or the Nasal Delivery Technology.

"**Liability" or** "**Liabilities**" means any and all debts, liabilities and obligations, whether accrued or fixed, absolute or contingent, matured or unmatured, or determined or determinable, including those arising under any law, action or governmental order and those arising under any contract, agreement, arrangement, commitment or undertaking, or otherwise.

"**Losses**" means, collectively, any and all damages, losses, taxes, Liabilities, claims judgments, penalties, costs and expenses (including reasonable legal fees and expenses); provided that, except in the event of Third Party Claims, "Losses" shall not include punitive, incidental, consequential, special or indirect damages.

"Nasal Delivery Technology" means Seller's proprietary technology allowing for nasal-cerebral drug delivery.

"**Parent**" means Tonix Pharmaceuticals Holding Corp.

"**Parties**" means collectively the Seller and Buyer.

"**Party**" means either the Seller or Buyer.

"Patents" means (a) U.S. Patent #s [***] and (b) all other patents and patent applications owned or controlled by Seller relating to or that cover, in whole or part, the Compounds, the Products, the Nasal Delivery Technology and/or the development, manufacture, composition, use, distribution, marketing, promotion, sale, administration or formulation of the Compounds, the Products, and the Nasal Delivery Technology and, in the case of both (a) and (b) any substitutions, extensions, additions, registrations, reissues, reexaminations, renewals, national phase applications, divisions, continuations, continuations-in-part or supplementary protection certificates thereof, and all foreign counterparts of any of the foregoing.

"**Person**" means any individual, corporation, partnership, limited liability company, joint venture, trust, business association, organization, Governmental Authority or other entity.

"**Product**" means any pharmaceutical product that incorporates any of the Compounds.

"**Purchase Price**" shall have the meaning in Section 3.1.

"**Purchased Assets**" means:

(a) the Intellectual Property Rights;

(b) the Transferred Contracts;

(c) all rights under any executory contract to which the Seller is a party related to the research, development, manufacture or commercialization of the Compounds or Products, the Nasal Delivery Technology or to the Intellectual Property Rights, including, without limitation, any license agreement, security agreement, indemnity agreement, subordination agreement, mortgage, equipment lease and other lease or sublease (whether or not capitalized), conditional sale or title retention agreement and any purchase order from any customer;

(d) any inventories of Compound, Product or other supplies, equipment and other tangible assets used in connection with the development of the Compounds, Products, or Nasal Delivery Technology;

(e) all authorizations, consents, approvals, licenses, orders, permits and exemptions of, and filings or registrations with, any Governmental Authority, to the extent transferable by the Seller;

(f) all books, records, files and papers relating to, or necessary to the conduct of, the Seller's business (other than Seller's tax returns, minute books and other company records);

(g) all rights and claims of the Seller, whether mature, contingent or otherwise, against any Person, whether in tort, contract or otherwise, including, without limitation, causes of action, unliquidated rights and claims under or pursuant to all warranties, representations and guarantees made by manufacturers, suppliers or vendors, claims for refunds, rights of off-set and credits of all kinds and all other general intangibles; provided, however, that such rights and claims shall not include any rights and claims of Seller under this Agreement;

(h) the benefit of coverage provided by all current and expired insurance policies of Seller to the extent they relate to any of the Purchased Assets or Assumed Liabilities; and

(i) all other assets owned by Seller used or useful in the research, development, manufacture, or commercialization of the Compounds, Products, or Nasal Delivery Technology, whether or not reflected on the books and records of the Seller.

"**Restricted Field**" shall have the meaning in Section 6.1(b).

"**Restricted Period**" shall have the meaning in Section 6.1(b).

"**Seller Indemnified Parties**" shall have the meaning in Section 8.2.

"**Stanford**" means The Board of Trustees of the Leland Stanford Junior University.

"**Stanford License**" means that certain Amended and Restated Exclusive License Agreement dated November 30, 2007, as amended, by and between Seller Stanford.

"**Stanford Payment**" shall have the meaning in Section 3.1.

"**Support Agreement**" shall have the meaning in Section 3.2.

"**Support Agreement Legend**" shall have the meaning in Section 3.2.

"**Technical Information**" means data and other information related to the Compounds, the Products, or the Nasal Delivery Technology that is necessary and useful for the further research, development, manufacture, commercialization, and/or registration of Compounds, Products or the Nasal Delivery Technology, that is owned by Seller or otherwise controlled by Seller, and that exists as of the Closing Date, including, without limitation, all INDs, correspondence with FDA or other governmental authorities, clinical data, pre-clinical data, adverse event data, pharmaceutical development reports, formulations and other medical and technical information.

"**Third Party**" means any legal Person, entity or organization other than Buyer, Seller or an Affiliate of either Party.

"**Third Party Claim**" shall have the meaning in Section 8.6(b).

"**Tonix Stock**" means the common stock of Parent, which is the parent company of Buyer.

"**Trademarks**" means all rights with respect to (a) the "Trigemina, Inc." trademark, trade name and related logo, (b) the trigemina.com domain name and (c) any and all other trademarks, service marks, service names, trade names, internet domain names, brand marks, brands, trade dress, package designs, product inserts, labels, logos and associated artwork owned by Seller, including any and all applications or registrations for any of the foregoing, and extensions, renewals, continuations or re-issues thereof, or amendments or modifications thereto.

"**Transferred Contracts**" means (a) the Stanford License and (b) the contracts listed on **Exhibit A**.

Section 1.2 Interpretation. When used in this Agreement the words "include", "includes" and "including" will be deemed to be followed by the words "without limitation." Any terms defined in the singular will have a comparable meaning when used in the plural, and vice-versa.

Section 1.3 Currency. All currency amounts referred to in this Agreement are in United States Dollars, unless otherwise specified.

ARTICLE 2
PURCHASE AND SALE OF ASSETS

Section 2.1 Purchase and Sale. Seller hereby sells, assigns, transfers, conveys and delivers to Buyer, and Buyer hereby purchases, acquires and accepts, all right, title and interest in and to the Purchased Assets, free and clear of all Encumbrances.

Section 2.2 Assumption of Assumed Liabilities; Excluded Liabilities. Buyer hereby assumes only the Assumed Liabilities. Buyer will not assume or be liable for any of the Excluded Liabilities.

Section 2.3 Deliveries. Within three (3) Business Days after the Closing Date, Seller will deliver to Buyer (a) any tangible materials included in the Purchased Assets and (b) copies (in the format in which they are maintained by Seller) of all books, records, data, contracts, files, patents, patent applications, trademarks, trademark files, and other information included in the Purchased Assets.

ARTICLE 3
FINANCIAL TERMS

Section 3.1 Purchase Price. As consideration for the Purchased Assets, in addition to Buyer's assumption of the Assumed Liabilities, Buyer shall at the Closing, (a) (i) pay to Seller an amount equal to Seven Hundred Seventy-Four Thousand Seven Hundred and Fifty Nine Dollars ($774,759) by wire transfer of immediately available funds to the account designated by Seller by written Notice to Buyer, such written Notice to be provided at least five Business Days prior to the Closing Date (such amount, the "**Cash Consideration**") and (ii) issue an aggregate of Two Million shares of Tonix Stock, subject to Section 3.2 (the "**Equity Consideration**"); and (b) pay to Stanford an amount equal to Two Hundred Fifty Thousand Two Hundred Forty One Dollars ($250,241), subject to Section 6.10 (such amount, the "**Stanford Payment**"). The Cash Consideration, the Equity Consideration and the Stanford Payment together shall be referred to herein as the **"Purchase Price**".

Section 3.2 **Tonix Stock.** Any shares of Tonix Stock to be issued pursuant to this Agreement have not been registered under the Securities Act of 1933, as amended, or state securities laws and may not be offered or sold in the United States absent registration with the Securities and Exchange Commission or an applicable exemption from such registration requirements. Any shares of Tonix Stock to be issued pursuant to this Agreement will be subject to a lock-up period ending on the date that is twelve (12) months after the date on which such shares are issued. Such lock-up period is binding on transferees of such shares. As a condition to the issuance of any Tonix Stock, Seller shall require, after the Closing, each Person being issued Tonix Stock to execute a Lock-Up Agreement in the form attached hereto as **Exhibit B**. In addition, the Seller shall enter into the Voting Agreement substantially in the form attached hereto as **Exhibit C** (the "**Support Agreement**"), which will, among other things, limit the rights of the Seller or any transferee to vote the shares represented thereby. The Seller understands that the Tonix Stock will include the following legend (the "**Support Agreement Legend**"):

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO ALL THE TERMS OF A SUPPORT AGREEMENT ENTERED INTO AS OF JUNE 11, 2020, BY AND AMONG TONIX PHARMACEUTICALS HOLDING CORP. (THE "**CORPORATION**"), AND THE HOLDER, A COPY OF WHICH AGREEMENT IS ON FILE AT THE PRINCIPAL OFFICE OF THE CORPORATION. SUCH AGREEMENT, AMONG OTHER THINGS, LIMITS THE RIGHT OF THE HOLDER OR ANY TRANSFEREE TO VOTE THE SHARES REPRESENTED HEREBY.

Section 3.3 **Taxes.** Each Party agrees to report (and to cause its Affiliates to report) the transactions contemplated by this Agreement in a manner consistent with Applicable Law and with the terms of this Agreement, and agrees not to take any position inconsistent therewith on any tax return, in any tax refund claim, in any litigation or otherwise. Each Party will bear fifty percent (50%) of any transfer, sales, value added, or stamp duty taxes payable in connection with the transactions contemplated hereby. Buyer shall have no obligation, however, for any capital gains or other income taxes owed by Seller as a result of the transaction.

Section 3.4 **Closing.** Pursuant to the terms and subject to the conditions of this Agreement, the closing of the transactions contemplated hereby (the "**Closing**") shall take place remotely via virtual closing by the exchange of documents by PDF or other electronic means, at 10:00 a.m. New York time on the date hereof, or such other time and place as Buyer and Seller may agree to in writing (the "**Closing Date**").

ARTICLE 4
REPRESENTATIONS AND WARRANTIES OF SELLER

Seller hereby represents and warrants to Buyer as of the Closing Date as follows:

Section 4.1 **Organization; Authority; Execution and Delivery**. Seller is a corporation, duly organized, validity existing and in good standing under the laws of the State of Delaware. Seller has the requisite corporate power and authority to enter into this Agreement and to consummate the transaction contemplated hereby. The execution and delivery of this Agreement by Seller and the consummation of the transactions contemplated hereby have been validly authorized by all necessary action on the part of Seller. This Agreement has been executed and delivered by Seller and, assuming the due authorization, execution and delivery of this Agreement by Buyer, will constitute the legal and binding obligation of Seller, enforceable against it in accordance with its terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium, fraudulent transfer and other similar laws affecting creditors' rights generally from time to time in effect and to general principles of equity (including concepts of materiality, reasonableness, good faith and fair dealing) regardless of whether considered in a proceeding in equity or at law.

Section 4.2 Reserved.

Section 4.3 Consents; No Violation, Etc. The execution and delivery by Seller of this Agreement does not, and the consummation of the transactions contemplated hereby (including the transfer of the Purchased Assets to Buyer) and the compliance with the terms hereof will not: (i) assuming the accuracy of the representations of the Buyer set forth in Section 5.2, violate any Applicable Law applicable to Seller, (ii) conflict in any material respect with any provision of the certificate of incorporation or by-laws (or similar organizational document) of Seller, (iii) conflict in any material respect with or violate in any material respect any Transferred Contract or any other contract to which Seller is a party or by which it is otherwise bound or (iv) require Seller to obtain any approval, authorization, consent, license, exemption, filing or registration from or with any court, arbitrator, Governmental Authority or pursuant to any material contract by which Seller is bound or that otherwise relates to any of the Purchased Assets, the Compound, the Product, or the Nasal Delivery Technology.

Section 4.4 Litigation. To Seller's knowledge after due inquiry, there are no claims, suits, actions or other proceedings pending or threatened against Seller at law or in equity before or by any Governmental Authority, domestic or foreign, involving or related to the Purchased Assets or which may in any way adversely affect the performance of Seller's obligations under this Agreement or the transactions contemplated hereby.

Section 4.5 Title to Purchased Assets. Immediately prior to the transfer of the Purchased Assets to Buyer, Seller and its Affiliates are the sole and exclusive owners of, have good and valid title to all of the Purchased Assets, free and clear of all Encumbrances. To Seller's knowledge, no Third Party holds any license, option, reversionary interest or other right with respect to any of the Purchased Assets or the Product.

Section 4.6 Transferred Contracts. Seller has delivered to Buyer complete copies of each of the Transferred Contracts, including any and all amendments thereto and (i) each Transferred Contract is valid, binding and enforceable on Seller (subject to applicable bankruptcy, insolvency, reorganization, moratorium, fraudulent transfer and other similar laws affecting creditors' rights generally from time to time in effect and to general principles of equity regardless of whether considered in a proceeding in equity or at law) and is in full force and effect, (ii) neither Seller (nor to Seller's knowledge, any other party to a Transferred Contract) is in material breach, violation of or default under any Transferred Contract and no event has occurred that with the lapse of time or the giving of notice or both would constitute a default thereunder, and (iii) no consent of any Person is required in connection with the assignment of the Transferred Contracts to Buyer pursuant to this Agreement.

Section 4.7 **Compliance with Applicable Law.** The research and development of the Compounds, the Products, and the Nasal Delivery Technology has at all times been conducted in compliance with all applicable Government Rules.

Section 4.8 **Intellectual Property**. To Seller's knowledge, all of the Intellectual Property Rights are valid, enforceable and in full force and effect. To Seller's knowledge, the use of the Compounds, the Products, and the Nasal Delivery Technology in connection with the research, development, manufacture, use, sale and commercialization of any Compounds, Products, or Nasal Delivery Technology does not infringe, misappropriate or violate any patent, copyright, trade secret or other intellectual property right of any Third Party. Seller has not received any written charge, complaint, claim, demand, or notice alleging any such infringement, misappropriation, or violation in the Territory (including any such claim that Seller must license or refrain from using any intellectual property rights relating to the Compounds, the Products or the Nasal Delivery Technology).

Section 4.9 **No Other Product-Related Assets.** The Purchased Assets constitute substantially all of the assets of Seller. Except for the Purchased Assets, neither Seller nor any of its Affiliates holds any ownership, license, option, right of reference or other right or interest in or to any patent, copyright, trade secret, trademark, data, know-how, contractual right or other tangible or intangible asset that is necessary or useful for the development or commercialization of the Compound, Product, or Nasal Delivery Technology.

Section 4.10 **Taxes.** Seller does not have any Liability with respect to any taxes for which Buyer would reasonably be expected to become liable or that would reasonably be expected to adversely affect Buyer's right to use and enjoy any of the Purchased Assets, free and clear of any Encumbrances, including liens for Taxes.

Section 4.11 **No Brokers.** Neither Seller nor any of its Affiliates has any Liability or obligation to pay any fees or commissions to any broker, finder or other agent (exclusive of professional fees to lawyers and accountants) with respect to this Agreement for which Buyer could become liable or obligated or which could result in an Encumbrance being filed against any of the Purchased Assets.

Section 4.12 **No Other Representations or Warranties.** Except for the representations and warranties of Seller expressly set forth in thisArticle 4, neither Seller nor any other Person makes any other express or implied representation or warranty on behalf of Seller.

ARTICLE 5
REPRESENTATIONS AND WARRANTIES OF BUYER

Buyer hereby represents and warrants to Seller as of the Closing Date as follows:

Section 5.1 **Organization; Authority; Execution and Delivery**. Buyer is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware. Buyer has the requisite corporate power and authority to enter into this Agreement and to consummate the transactions contemplated hereby. The execution and delivery of this Agreement by Buyer and the consummation of the transactions contemplated hereby have been authorized by all necessary action on the part of Buyer. This Agreement has been executed and delivered by Buyer and, assuming the due authorization, execution and delivery of this Agreement by Seller, constitutes the legal and binding obligation of Buyer, enforceable against Buyer in accordance with its terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium, fraudulent transfer and other similar laws affecting creditors' rights generally from time to time in effect and to general principles of equity (including concepts of materiality, reasonableness, good faith and fair dealing regardless) of whether considered in a proceeding in equity or at law.

Section 5.2 **Consents; No Violations, Etc**. The execution and delivery of this Agreement by Buyer does not, and the consummation of the transactions contemplated hereby (including the transfer of the Purchased Assets to Buyer) and the compliance with the terms hereof will not: (i) violate any Applicable Law applicable to Buyer or Parent, (ii) conflict with any provision of the certificate of incorporation or by-laws (or similar organizational document) of Buyer or Parent, (iii) conflict with or violate any contract to which Buyer, Parent or any of their respective Affiliates is a party or by which it is otherwise bound or (iv) require Buyer, Parent or any of their respective Affiliates to obtain any approval, authorization, consent, license, exemption, filing or registration from or with any court, arbitrator, Governmental Authority or pursuant to any contract by which Buyer or any of its Affiliates is bound.

Section 5.3 **No Brokers.** Neither Buyer, Parent nor any of their respective Affiliates has any Liability or obligation to pay any fees or commissions to any broker, finder or other agent (exclusive of professional fees to lawyers and accountants) with respect to this Agreement for which Seller could become liable or obligated.

Section 5.4 **Litigation**. To Buyer's knowledge, there are no claims, suits, actions or other proceedings pending or threatened against Buyer, Parent or any of their respective Affiliates at law or in equity before or by any Governmental Authority, domestic or foreign, which may in any way adversely affect the performance of Buyer's obligations under this Agreement or the transactions contemplated hereby.

Section 5.5 **No Other Representations or Warranties.** Except for the representations and warranties of Buyer expressly set forth in thisArticle 5, neither Buyer nor any other Person makes any other express or implied representation or warranty on behalf of Buyer.

ARTICLE 6
OTHER AGREEMENTS

Section 6.1 **Restrictive Covenants.** As a material inducement for Buyer to enter into this Agreement, Seller and each Executive Shareholder agree to the covenants and restrictions set forth below in this Section 6.1, and Seller and each Executive Shareholder hereby acknowledge and agree that Buyer would not execute and deliver this Agreement and consummate the transactions contemplated hereby in the absence of such covenants by Seller and the Executive Shareholders.

(a) Seller and the Executive Shareholders: (i) shall not, directly or indirectly, disclose or use or otherwise exploit for their own benefit or for the benefit of any other Person, any of the Know-How, Technical Information or other non-public information included in the Purchased Assets (collectively, " **Confidential Information**") and (ii) shall safeguard any Confidential Information in their possession or control by all reasonable measures. Seller and each Executive Shareholder acknowledge and agree that any and all Confidential Information will be, as of the Closing Date, the exclusive property of Buyer.

(b) For a period of three (3) years from the Closing Date (the "**Restricted Period**"), Seller and each Executive Shareholder shall not (whether directly or through any Affiliate, licensee or other Third Party) develop, assist in the development, sell, market or commercialize any products or therapies containing oxytocin, noiciceptin or any derivatives thereof (the "**Restricted Field**")

(c) Each Executive Shareholder further agrees that, during the Restricted Period, he will not directly or indirectly, serve as director, consult with, provide services to, own any interest in or otherwise provide finances to any Person that is engaged in the Restricted Field (other than ownership of stock or other securities in a publicly traded entity).

(d) During the Restricted Period, Seller and each Executive Shareholder shall not solicit for employment or other engagement any employee or agent of Buyer or any of its Affiliates.

Section 6.2 Seller's Name. Within thirty (30) Business Days after the Closing Date, Seller shall (a) amend its Certificate of Incorporation to a name not containing the word "Trigemina" or any term confusingly similar thereto and (b) abandon any and all fictitious business name filing(s) for any name that includes "Trigemina" or any term confusingly similar thereto.

Section 6.3 Bulk Sales. Seller shall use best efforts to comply with the provisions of any bulk sales, bulk transfer or similar Applicable Laws of any jurisdiction that may otherwise be applicable with respect to the sale of any or all of the Purchased Assets to Buyer; it being understood that any Liabilities arising out of the failure of Seller to comply with the requirements and provisions of any bulk sales, bulk transfer or similar Applicable Laws of any jurisdiction shall be treated as Excluded Liabilities.

Section 6.4 Reserved.

Section 6.5 Reserved.

Section 6.6 **Risk of Loss.** The risk of loss with respect to any Purchased Asset will remain with Seller unless and until the Closing has been consummated in accordance with the terms of this Agreement. The Closing shall be deemed effective for all purposes as of 12:01 A.M., Eastern Time, on the first day following the Closing Date.

Section 6.7 **Reserved**.

Section 6.8 **Reserved**.

Section 6.9 **Further Assurances**. Each Party, upon the request of the other Party and without further consideration, will do, execute, acknowledge and deliver or cause to be done, executed, acknowledged or delivered all such further acts, deeds, documents, assignments, transfers, conveyances, powers of attorney and assurances as may be reasonably necessary to effect complete consummation of the transactions contemplated by this Agreement.

Section 6.10 **Stanford License**. The Parties have negotiated and agreed upon a Settlement, Assignment and Assumption Agreement with Stanford ("**Assignment and Assumption Agreement**") providing for: (a) the payment by Buyer of One Hundred Seventy-Five Thousand Two Hundred Forty One Dollars ($175,241) in order to settle all outstanding and past due amounts under the Stanford License; (b) the payment by Buyer of the Seventy-Five Thousand Dollars ($75,000) assignment fee as required in order to assign the Stanford License; (c) the assignment and assumption of the Stanford License by Seller; and (d) any other amendments or modifications that the Parties and Stanford negotiated and agreed upon. The Assignment and Assumption Agreement shall be signed by the Parties and Stanford and effective on the Closing Date.

ARTICLE 7
RESERVED

ARTICLE 8
INDEMNIFICATION; LIABILITY

Section 8.1 **Indemnification by Seller**. Subject to the terms and conditions of this Article 8, Seller hereby agrees to indemnify and defend Buyer and its Affiliates, and their respective officers, directors and employees (the "**Buyer Indemnified Parties**") against, and agrees to hold them harmless from, any Losses to the extent such Losses arise from or in connection with the following:

(a) any breach by Seller of any representation or warranty made by Seller under this Agreement;

(b) any breach by Seller of any of its covenants, agreements or obligations contained in this Agreement;

(c) any taxes of Seller; and

(d) any of the Excluded Liabilities.

Section 8.2 **Indemnification by Buyer**. Subject to the terms and conditions of this Article 8, Buyer hereby agrees to indemnify and defend Seller and its officers, directors and employees (the "**Seller Indemnified Parties**") against, and agrees to hold them harmless from, any Losses to the extent such Losses arise from or in connection with the following:

(a) any breach by Buyer of any representation or warranty made by Buyer under this Agreement;

(b) any breach by Buyer of any of its covenants, agreements or obligations contained in this Agreement; and

(c) any of the Assumed Liabilities.

Section 8.3 **Certain Limitations.** The aggregate amount of all Losses that may be recovered by the Buyer Indemnified Parties from Seller pursuant to all claims for indemnification under Section 8.1(d), for breaches of representations and/or warranties under Section 8.1(a) (other than with respect to (A) fraud and/or (B) Seller's breach of any of the representations or warranties in Section 4.1 ("Organization; Authority; Execution and Delivery"), Section 4.3 ("Consents; No Violation, Etc.") or Section 4.5 ("Title to Purchased Assets") (collectively, the "**Fundamental Representations**")), and the aggregate amount of all Losses that may be recovered by the Seller Indemnified Parties from Buyer pursuant to all claims for indemnification for breaches of representations and/or warranties under Section 8.2(a), shall not exceed, in each case, Two Million Four Hundred Forty-Five Thousand Dollars ($2,445,000.00) (the "**Cap**"). For the avoidance of doubt, the Cap shall not apply to either Party's indemnity obligations under Section 8.1(b), Section 8.1(c), Section 8.2(b), or Section 8.2(c).

Section 8.4 **Survival of Representations and Warranties.** Except for the Fundamental Representations (which shall survive and remain in full force and effect at all times after the Closing Date), the representations and warranties set forth in Article 4 and Article 5 shall survive and remain in full force and effect until the date that is twenty-four (24) months after the Closing Date, and neither Seller nor Buyer will have Liability with respect to any such claim unless Buyer or Seller, as applicable, notifies the other of such a claim on or before such twenty-four (24) month date.

Section 8.5 **Sole Remedy.** Except in the event of fraud, the Parties acknowledge and agree that their sole and exclusive remedy with respect to any and all claims with respect to breaches of any representation or warranty stated in Article 4 or Article 5 shall be pursuant to the rights to indemnification set forth in this Article 8.

Section 8.6 Indemnity Procedures.

(a) In order for an indemnified party under this Article 8 (an "**Indemnified Party**") to be entitled to any indemnification provided for under this Agreement, the Indemnified Party will, within a reasonable period of time following the discovery of the matters giving rise to any Losses, notify its applicable insurer and the indemnifying party under this Article 8 (the "**Indemnifying Party**") in writing of its claim for indemnification for such Losses, specifying in reasonable detail the nature of the Losses and the amount of the Liability estimated to accrue therefrom; provided, however, that failure to give notification will not affect the indemnification provided hereunder, except to the extent the Indemnifying Party will have been actually prejudiced as a result of the failure. Thereafter, the Indemnified Party will deliver to the Indemnifying Party, within a reasonable period of time after the Indemnified Party's receipt of such request, all information, records and documentation reasonably requested by the Indemnifying Party with respect to such Losses. The Indemnifying Party shall control all litigation reflecting to the indemnification, including without limitation choice of counsel, staffing, and all decisions to be made with the litigation.

(b) If the indemnification sought pursuant hereto involves a claim made by a Third Party against the Indemnified Party (a "**Third Party Claim**"), the Indemnifying Party will be entitled to participate in the defense of such Third Party Claim and, if it so chooses, to assume the defense of such Third Party Claim with counsel selected by the Indemnifying Party. Should the Indemnifying Party so elect to assume the defense of a Third Party Claim, the Indemnifying Party will not be liable to the Indemnified Party for any legal expenses subsequently incurred by the Indemnified Party in connection with the defense thereof. If the Indemnifying Party assumes such defense, the Indemnifying Party will control such defense. The Indemnifying Party will be liable for the reasonable fees and expenses of counsel employed by the Indemnified Party for any period during which the Indemnifying Party has not assumed the defense thereof (other than during any period in which the Indemnified Party will have failed to give notice of the Third Party Claim as provided above). If the Indemnifying Party chooses to defend or prosecute a Third Party Claim, all of the Parties hereto will cooperate in the defense or prosecution thereof. Such cooperation will include the retention and (upon the Indemnifying Party's request) the provision to the Indemnifying Party of records and information, which are reasonably relevant to such Third Party Claim, and making employees available on a mutually convenient basis to provide additional information and explanation of any material provided hereunder. If the Indemnifying Party chooses to defend or prosecute any Third Party Claim, the Indemnifying Party will seek the approval of the Indemnified Party (not to be unreasonably withheld) to any settlement, compromise or discharge of such Third Party Claim the Indemnifying Party may recommend if, pursuant to or as a result of such settlement or cessation, (i) injunctive or other equitable relief will be imposed against the Indemnified Party or (ii) if such settlement does not expressly and unconditionally release the Indemnified Party from all Liabilities and obligations with respect to such Third Party Claim with prejudice. Whether or not the Indemnifying Party will have assumed the defense of a Third Party Claim, the Indemnified Party will not admit any Liability with respect to, or settle, compromise or discharge, such Third Party Claim without the Indemnifying Party's prior written consent. The Indemnifying Party shall reimburse upon demand, all reasonable costs and expenses incurred by the Indemnified Party in cooperation with the defense or prosecution of the Third Party Claim. Except with the written consent of the Indemnifying Party, no settlement of any Third Party Claim shall be determinative of the amount of Losses relating to such matter or whether an Indemnified Party is entitled to indemnification hereunder.

ARTICLE 9
GENERAL PROVISIONS

Section 9.1 **Expenses**. Except as otherwise specified in this Agreement, all costs and expenses, including fees and disbursements of counsel, financial advisors and accountants, incurred in connection with this Agreement and the transactions contemplated hereby will be paid by the Party incurring such costs and expenses.

Section 9.2 **Notices**. All notices and other communications required or permitted to be given or made pursuant to this Agreement shall be in writing signed by the sender and shall be deemed duly given: (a) on the date delivered, if personally delivered, (b) on the date sent by facsimile with automatic confirmation by the transmitting machine showing the proper number of pages were transmitted without error, (c) on the Business Day after being sent by Federal Express or another recognized overnight mail service which utilizes a written form of receipt for next day or next Business Day delivery, or (d) upon receipt after mailing, if mailed by United States postage-prepaid certified or registered mail, return receipt requested, in each case addressed to the applicable party at the address set forth below; provided that a Party may change its address for receiving notice by the proper giving of notice hereunder:

if to Buyer, to:

Address:
Tonix Pharmaceuticals Holding Inc
509 Madison Avenue #1608
New York, NY 10022
Attn: Seth Lederman, M.D.
Chief Executive Officer

with a copy to:

Lowenstein Sandler LLP
One Lowenstein Drive
Roseland, New Jersey 07068
Facsimile: (973) 597-2400
Attn: Michael J. Lerner, Esq.

if Seller, to:

Trigemina Holdings, Inc.
1036 Country Club Drive, Suite 200
Moraga, CA 94556
Attn: Michael Scaife, Ph.D.

Section 9.3 **Headings**. The table of contents and headings contained in this Agreement are for reference purposes only and will not affect in any way the meaning or interpretation of this Agreement.

Section 9.4 **Severability**. If any term or other provision of this Agreement is invalid, illegal or incapable of being enforced under any law or public policy, all other terms and provisions of this Agreement will nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to any Party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the Parties will negotiate in good faith to modify this Agreement so as to effect the original intent of the Parties as closely as possible in an acceptable manner in order to ensure that the transactions contemplated hereby are consummated as originally contemplated to the greatest extent possible.

Section 9.5 **Counterparts**. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, and all of which together shall constitute one and the same instrument. Signatures provided by facsimile transmission or in Adobe Portable Document Format (PDF) sent by electronic mail shall be deemed to be original signatures.

Section 9.6 **Entire Agreement; No Third Party Beneficiaries.** This Agreement constitutes the entire agreement and supersede all prior agreements and understandings both written and oral (including any letter of intent, memorandum of understanding electronic communicators, e-mail or term sheet), between the Parties with respect to the subject matter hereof. Except as specifically provided herein, this Agreements is not intended to confer upon any Person other than the Parties any rights or remedies hereunder.

Section 9.7 **Governing Law**. This Agreement and all matters arising directly or indirectly herefrom shall be governed by and construed and enforced in accordance with the laws of the State of New York applicable to agreements made and to be performed entirely in such state, without giving effect to the conflict of law principles thereof.

Section 9.8 **Jurisdiction; Venue, Service of Process**. Buyer and Seller each agrees to irrevocably submit to the sole and exclusive jurisdiction of the state and federal courts located in New York County, New York for any suit, action or other proceeding arising out of this Agreement or any transaction contemplated hereby, and hereby waives any objection to the laying of venue in such courts. Each Party agrees that service of any process, summons, notice or document by U.S. registered mail or recognized international courier service to such Party's address set forth in this Agreement shall be effective service of process.

Section 9.9 **Publicity**. Neither Party will make any public announcement concerning, or otherwise publicly disclose, any information with respect to the transactions contemplated by this Agreement or any of the terms and conditions hereof without the prior written consent of the other Party, provided, however, that Buyer may issue a press release about this transaction on or after the Closing Date. Notwithstanding the foregoing (a) either Party may make any public disclosure concerning the transactions contemplated hereby that in the opinion of such Party's counsel may be required by any Government Rule or the rules of any stock exchange on which such Party's or any of its Affiliates' securities trade and (b) Buyer may publicize its development of the Compounds, the Nasal Delivery Technology and/or any resulting Products without approval from Seller.

Section 9.10 **Assignment**. Neither Party may assign its rights or obligations under this Agreement without the prior, written consent of the other Party; provided, however, that notwithstanding the foregoing, either Party may assign its rights and obligations under this Agreement, without any obligation to obtain the other Party's consent, to (i) any of its Affiliates or (ii) in connection with any merger, consolidation, sale of all or substantially all of the assets of such Party (or, in the case of Buyer, Buyer's business related to the Product) or any similar transaction. Any permitted assignee or successor-in-interest will assume all obligations of its assignor under this Agreement. No assignment will relieve either Party of its responsibility for the performance of any obligation. This Agreement will be binding upon and inure to the benefit of the Parties hereto and their respective successors and permitted assigns.

Section 9.11 **Amendments and Waivers**. This Agreement may not be amended except by an instrument in writing signed by both Parties. Each Party may, by a signed written instrument, waive compliance by the other Party with any term or provision of this Agreement that such other Party was obligated to comply with or perform.

[Remainder of Page Intentionally Left Blank- Signature Page to Follow]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be signed by their respective representatives thereunto duly authorized, all as of the date first written above.

TONIX PHARMACEUTICALS, INC.

By: _____

Name: Seth Lederman, M.D.

Title: Chief Executive Officer

TRIGEMINA HOLDINGS, INC.

By: _____

Name: Michael Scaife, Ph.D.

Title: Chief Executive Officer

Executive Shareholders
(solely for the purposes of (Section 6.1)):

By:_____

Name: Michael C. Scaife, Ph.D.

By:_____

Name: Taylor Rooke

By:_____

Name: Shashidhar Kori, M.D.

[Signature page to Asset Purchase Agreement]

EXHIBIT A
Certain Transferred Contracts

Stanford License

[***]

EXHIBIT B
Form of Lock-Up Agreement

Lock-Up Agreement

[●], 2020

Tonix Pharmaceuticals Holding Corp.
509 Madison Avenue, Suite 1608
New York, New York 10022

Ladies and Gentlemen:

The undersigned understands that Trigemina Holdings, Inc. ("**Trigemina**"), a Delaware corporation, propose to enter into an Asset Purchase Agreement (the "**Agreement**") with Tonix Pharmaceuticals, Inc. ("**TPI**"), a Delaware corporation and wholly owned subsidiary of Tonix Pharmaceuticals Holding Corp., a Nevada corporation (the "**Company**"), providing for the payment of Equity Consideration as set forth in the Agreement, the issuance of shares of common stock, par value $0.001 per share, of the Company (the "**Common Shares**"). Capitalized terms used herein and not otherwise defined shall have the meanings set forth in the Agreement.

To induce TPI to enter into the Agreement, the undersigned hereby agrees that, without the prior written consent of the Company, the undersigned will not, during the period commencing on the date hereof and ending twelve (12) months after the date on which the Common Shares are issued to the undersigned with respect to the Equity Consideration (the "**Lock-Up Period**"), (1) offer, pledge, sell, contract to sell, grant, lend, or otherwise transfer or dispose of, directly or indirectly, any Common Shares issued with respect to that Equity Consideration or any securities convertible into or exercisable or exchangeable for such Common Shares, whether now owned or hereafter acquired by the undersigned or with respect to which the undersigned has or hereafter acquires the power of disposition (collectively, the "**Lock-Up Securities**"); (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Lock-Up Securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Lock-Up Securities, in cash or otherwise; or (3) publicly disclose the intention to make any offer, sale, pledge or disposition, or to enter into any transaction, swap, hedge or other arrangement relating to any Lock-Up Securities. The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of the undersigned's Lock-Up Securities except in compliance with this lock-up agreement.

The undersigned understands that the Company and TPI are relying upon this lock-up agreement in proceeding toward execution of the Agreement. The undersigned further understands that this lock-up agreement is irrevocable and shall be binding upon the undersigned's heirs, legal representatives, successors and assigns.

Very truly yours,

_____

(Name - Please Print)

_____

(Signature)

_____

(Name of Signatory, in the case of entities - Please Print)

_____

(Title of Signatory, in the case of entities - Please Print)

Address: _____

_____

_____

[Signature page to Lock-Up Agreement]

EXHIBIT C
Form of Support Agreement

SHAREHOLDER VOTING AGREEMENT

THIS SHAREHOLDER VOTING AGREEMENT (this "Agreement") is made and entered into as of June 11 2020, by and among Tonix Pharmaceuticals, Inc. (the "Company"), Tonix Pharmaceuticals Holding Corp. (the "Parent") and Trigemina Holdings, Inc. (the "Stockholder"). Capitalized terms used herein but not defined shall have the meaning set forth in the Asset Purchase Agreement, as defined below.

RECITALS

A . **WHEREAS,** concurrent herewith, Stockholder and Company are entering into an Asset Purchase Agreement (the "Asset Purchase Agreement"), pursuant to which Stockholder shall receive 2,000,000 shares of Parent's common stock, $0.001 par value (the "Common Stock");

B. **WHEREAS,** as an inducement to enter into the Asset Purchase Agreement, and as one of the conditions to the consummation of the transactions contemplated by the Asset Purchase Agreement, the Stockholder has agreed to enter into this Agreement; and

C . **WHEREAS,** Stockholder agrees to vote the shares of Common Stock (the 'Shares") over which Stockholder has voting power pursuant to the Asset Purchase Agreement as described below.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Agreement to Vote Shares.

(a) From the date hereof until the Expiration Date (as defined below), at every meeting of the stockholders of Parent, and at every adjournment or postponement thereof, and on any action or approval by written consent of the stockholders of Parent, in each case, Stockholder (in its capacity as a stockholder) shall appear at the meeting or otherwise cause Stockholder's Shares to be present for purposes of establishing a quorum and shall vote such Shares in favor of each matter proposed and recommended for approval by Parent's management at such meeting.

(b) If Stockholder is the beneficial owner, but not the record holder, of the Shares, Stockholder agrees to take all actions necessary to cause the record holder and any nominees to vote all of Stockholder's Shares in the manner provided in Section 1(a).

2. Representations and Warranties of Stockholder. Stockholder represents and warrants to Company and Parent that:

(a) Stockholder has, and at all times will have, full legal power, authority and right to vote or to direct the voting of all Stockholder's Shares then owned of record or beneficially by Stockholder as described in this Agreement, without the consent or approval of, or any other action on the part of, any other Person. Without limiting the generality of the foregoing, Stockholder has not and will not enter into any voting agreement (other than this Agreement) with any Person with respect to any of Stockholder's Shares, has not and will not grant any Person any proxy (revocable or irrevocable) or power of attorney with respect to any of Stockholder's Shares, has not and will not deposit any of Stockholder's Shares in a voting trust or enter into any arrangement or agreement with any Person limiting or affecting his legal power, authority or right to vote Stockholder's Shares on any matter.

(b) The execution and delivery of this Agreement and the performance by Stockholder of the covenants and obligations hereunder will not result in any breach or violation of or be in conflict with or constitute a default under any term of any agreement, judgment, injunction, order, decree, law, regulation or arrangement to which Stockholder is a party or by which Stockholder (or any of its assets) is bound.

3. Termination. This Agreement shall terminate on the date (the "Expiration Date") that is the earlier of (i) fifteen (15) years after the date of this Agreement or (ii) the date when Stockholder no longer owns any Shares of Parent, provided that the Company may, at its sole discretion, extend the period specified in Section 3(i) prior to the Expiration Date by giving notice to Stockholder at any time within the two (2) year period prior to the expiration of such period. Upon such termination, no party shall have any further obligations or liabilities hereunder; provided that such termination shall not relieve any party from Liability for any breach of this Agreement prior to such termination.

4. Miscellaneous Provisions.

(a) Amendments, Modifications and Waivers. No amendment, modification or waiver in respect of this Agreement shall be effective against any party unless it shall be in writing and signed by Stockholder, the Company and Parent.

(b) Entire Agreement. This Agreement constitutes the entire agreement among the parties to this Agreement and supersedes all other prior agreements and understandings, both written and oral, between the parties with respect to the subject matter hereof.

(c) Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of New York, without regard to any applicable principles of conflicts of law thereof. The parties submit to the exclusive jurisdiction of that state and federal courts located in New York for any action, dispute or proceeding arising out of this Agreement.

(d) Assignment and Successors. This Agreement and all of the provisions hereof shall be binding upon and inure to the benefit of the parties hereto. This Agreement and all the provisions hereof may not be assigned by Stockholder or the Company or Parent without the prior written consent of each party. Stockholder is free to transfer its Shares, but any transferee of Stockholder's Shares must enter into a joinder to this Agreement (no joinder is required if such Shares are transferred in anonymous open market trading in ordinary brokerage transactions that are not pre-arranged or pre-solicited).

(e) No Third Party Rights. Nothing in this Agreement, express or implied, is intended to or shall confer upon any Person (other than the parties hereto) any right, benefit or remedy of any nature whatsoever under or by reason of this Agreement.

(f) Severability. If any provision of this Agreement is held invalid or unenforceable by any court of competent jurisdiction, the other provisions of this Agreement will remain in full force and effect. Any provision of this Agreement held invalid or unenforceable only in part or degree will remain in full force and effect to the extent not held invalid or unenforceable.

(g) Specific Performance; Injunctive Relief. Stockholder acknowledges that the Company or Parent may be irreparably harmed and that there may be no adequate remedy at law for a breach of any of the covenants or agreements of Stockholder set forth in this Agreement. Therefore, Stockholder hereby agrees that, in addition to any other remedies that may be available to the Company or Parent upon any such breach, the Company or Parent, or both of them, shall have the right to seek specific performance, injunctive relief or any other remedies available to such party at law or in equity.

(h) Notices. All notices, consents, requests, claims, demands and other communications under this Agreement shall be in writing (which shall include communications by e-mail) and shall be delivered (a) in person or by courier or overnight service, or (b) by e-mail with a copy delivered as provided in clause (a):

(i) If to the Company:

Tonix Pharmaceuticals, Inc.
509 Madison Ave.
Suite 1608
New York, NY 10020
Attn: Seth Lederman, MD – Chief Executive Officer

(ii) If to Parent:

Tonix Pharmaceuticals Holding Corp.
509 Madison Ave.
Suite 1608
New York, NY 10020
Attn: Seth Lederman, MD – Chief Executive Officer

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

Lowenstein Sandler, LLP
One Lowenstein Drive
Roseland, New Jersey 07068
Attn: Michael J. Lerner
E-Mail: mlerner@lowenstein.com
Facsimile No.: +1 973-597-6395

(iii) If to Stockholder:

TRIGEMINA, INC.
1036 Country Club Drive, Suite 200
Moraga, CA 94556
Attention: Michael Scaife, Ph.D.

or to such other address as the parties hereto may designate in writing to the other in accordance with this Section 6(h). Any party may change the address to which notices are to be sent by giving written notice of such change of address to the other parties in the manner above provided for giving notice. If delivered personally or by courier, the date on which the notice, request, instruction or document is delivered shall be the date on which such delivery is made and if delivered by e-mail transmission or mail as aforesaid, the date on which such notice, request, instruction or document is received shall be the date of delivery.

(i) Counterparts. This Agreement may be executed in several counterparts, each of which shall be deemed an original and all of which shall constitute one and the same instrument, and shall become effective when counterparts have been signed by each of the parties and delivered to the other parties; it being understood that all parties need not sign the same counterpart.

(j) Headings. The headings contained in this Agreement are for the convenience of reference only, shall not be deemed to be a part of this Agreement and shall not be referred to in connection with the construction or interpretation of this Agreement.

[Signatures on the Following Pages]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

COMPANY:

TONIX PHARMACEUTICALS, INC.

By: _____
Name: Seth Lederman
Title: President & Chief Executive Officer

PARENT:

TONIX PHARMACEUTICALS HOLDING CORP.

By: _____
Name: Seth Lederman
Title: President & Chief Executive Officer

STOCKHOLDER:

TRIGEMINA HOLDINGS, INC.

By: _____
Name: Michael Scaife, Ph.D.
Title: Chief Executive Officer

Exhibit 10.03

AMENDMENT № 2

TO THE

EXCLUSIVE LICENSE AGREEMENT (AMENDED AND RESTATED) EFFECTIVE THE 3OTH DAY OF NOVEMBER 2OO7

BETWEEN

STANFORD UNIVERSITY

AND

TRIGEMINA, INC.

Effective the 26th day of March 2020, THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY ("Stanford"), an institution of higher education having powers under the laws of the State of California, and Trigemina, Inc. ("Trigemina"), a corporation having a principal place of business at 1036 Country Club Drive, Suite 200, Moraga, CA 94556, agree as follows:

1. BACKGROUND

Stanford and Trigemina are parties to a License Agreement effective the 30th day of November 2007 ("Original Agreement") covering "Therapy Procedure for Cranial Pain Syndromes," disclosed in Stanford Docket S05-079 from the laboratory of Dr. Dave Yeomans and jointly owned with HealthPartners Research Foundation (HPRF) and disclosed in HPRF Docket 200507.

The Original Agreement was amended by an Amendment No. 1 effective November 10, 2015 to delay the due date for payment of the License Maintenance Fees due from 2009 through 2015.

Stanford and Trigemina wish to amend the Original Agreement ("Amendment No. 2") to set dates by which to pay in full all unpaid License Maintenance Fees and to define future due diligence milestones.

2. AMENDMENT

2.1 **Amendment Fee.** Within 30 days after execution of this Amendment No. 2, Trigemina will pay to Stanford an amendment fee of $2,000.

2.2 **Licensed Maintenance Fees.** Within 30 days after execution of this Amendment No. 2, Trigemina will pay to Stanford the total due on License Maintenance Fees as detailed in Appendix 1. Notwithstanding the foregoing, Trigemina is still obligated to pay the License Maintenance Fees as detailed in Sections 6.2(B) and 6.2(C) of the Original Agreement.

2.3 **Past Patent Costs**. Within 30 days after execution of this Amendment No. 2, Trigemina will reimburse Stanford $20,241 to offset past patenting expenses for Stanford Docket S05-079.

2.4 Milestone 3 of Appendix A of the Original Agreement is hereby deleted in its entirety and replaced with the following:

3. By July 1, 2020 Trigemina will meet with Stanford to discuss further diligence milestones based on Trigenima's business plans and industry standards for the development and commercialization of Licensed Product. Such diligence milestones will be attached to Appendix A of the Original Agreement and will include, but not be limited to, the projected date of filing a new drug application (NDA) with the FDA and first commercial sale of a Licensed Product.

3. OTHER TERMS

3.1 All other terms of the Original Agreement remain in full force and effect.

3.2 The parties to this document agree that a copy of the original signature (including an electronic copy) may be used for any and all purposes for which the original signature may have been used. The parties further waive any right to challenge the admissibility or authenticity of this document in a court of law based solely on the absence of an original signature.

The parties execute this Amendment No. 2 by their duly authorized officers or representatives.

THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY

Signature: Mona Wan (Mar 30, 2020)

Name: Mona Wan

Title: Associate Director

Date: Mar 30, 2020

TRIGEMINA INC.

Signature: Michael C. Scaife

Name: MICHAEL C. SCAIFE

Title: CEO TRIGEMINA INC

Date: March 30, 2020

Appendix 1

Year	License Maintenance Fee Past Due	Invoice Number
2009	$10,000	57911
2010	$10,000	61393
2011	$15,000	55061
2012	$15,000	68610
2013	$15,000	72283
2014	$15,000	75924
2015	$15,000	79842
2016	$15,000	84070
2017	$15,000	88744
2018	$15,000	93403
2019	$15,000	98384
Total	$155,000	

Exhibit 10.04

ASSIGNMENT AND ASSUMPTION AGREEEMENT AND AMENDMENT NO. 3 TO

THE EXCLUSIVE LICENSE (AMENDED AND RESTATED) AGREEMENT

This Assignment and Assumption Agreement and Amendment No. 3 to the Exclusive License (Amended and Restated) ("**Agreement**"), entered into as of June 11, 2020 ("**Effective Date**"), is made by and among The Board of Trustees of the Leland Stanford Junior University, ("**Stanford**"), an institution of higher education having powers under the laws of the State of California; Trigemina, Inc. ("**Trigemina**"), a corporation having a principal place of business at 1036 Country Club Drive, Suite 200, Moraga, California 94556; and Tonix Pharmaceuticals, Inc., a corporation having a principal place of business at 509 Madison Avenue, Suite 306, New York, NY 10022 (" **Tonix**" and, together with Trigemina and Stanford, the "**Parties**", and each of Tonix, Trigemina, and Stanford, a "**Party**").

WITNESSETH:

WHEREAS, Trigemina and Stanford entered into that certain Exclusive License (Amended and Restated) dated November 30, 2007, as amended by Amendment No. 1 dated November 10, 2015 and Amendment No. 2 dated March 26, 2020 (the "**License Agreement**");

WHEREAS, Trigemina Holdings, Inc. ("**Trigemina Holdings**") and Tonix have entered into an Asset Purchase Agreement dated June 11, 2020 ("**APA**"), pursuant to which Trigemina Holdings has agreed to assign the License Agreement in full, including all rights and obligations thereunder, to Tonix and Tonix has agreed to accept such assignment of rights and agrees to assume such obligations;

WHEREAS, there are certain past due amounts owed by Trigemina to Stanford under the License Agreement that Tonix has agreed to pay as part of the consideration under the APA; and

WHEREAS, Stanford and Tonix wish to make certain amendments and modifications to the License Agreement as set forth herein.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

AGREEMENT

SECTION 1. Defined Terms. Capitalized terms not defined in this Agreement shall have the respective meaning set forth in the License Agreement, unless otherwise stated.

SECTION 2. Assignment and Assumption.

(a) Trigemina hereby assigns, transfers, and conveys to Tonix all of Trigemina's rights and obligations under the License Agreement, and Tonix accepts and assumes from Trigemina such assignment, transfer, and conveyance. As of the Effective Date, Tonix shall be deemed a Party to the License Agreement substituted in the place of Trigemina, and Tonix will benefit from all of the rights of, and shall be bound by and perform all of the obligations, representations, covenants and warranties of Trigemina under the License Agreement as if Tonix were originally named in place of Trigemina in the License Agreement.

(b) In connection with the assignment and assumption of the License Agreement by Tonix, Tonix shall pay to Stanford the Seventy-Five Thousand Dollar ($75,000) assignment fee required under the License Agreement within ten (10) days of the Effective Date.

(c) Stanford hereby acknowledges and agrees that this Section 2 satisfies any and all requirements in Section 14.3 of the License Agreement regarding the assignment and assumption of the License Agreement by Tonix.

SECTION 3. Outstanding License Agreement Payments. Within ten (10) days of the Effective Date, Tonix shall pay to Stanford One Hundred Seventy-Five Thousand Two Hundred Forty-One Dollars ($175,241) in satisfaction of all outstanding or accrued unpaid payment obligations under the License Agreement as of the Effective Date, including the amendment fees, maintenance fees and past patent costs set forth in Amendment No. 2.

SECTION 4. Amendments to the License Agreement.

(a) The Parties agree to amend the License Agreement as follows:

(i) Section 6.3(A) of the License Agreement shall be amended and replaced in its entirety as follows:

"(A) $125,000 upon Trigemina's filing of the first Investigational New Drug application for a Phase III clinical trial of the Licensed Product;".

(ii) Milestone 3 of Appendix A of the License Agreement shall be deleted in its entirety and replaced by the following:

"By July 1, 2021 Trigemina will meet with Stanford to discuss further diligence milestones based on Trigemina's business plans and industry standards for the development and commercialization of the Licensed Product. Such diligence milestones will be attached to Appendix A to the License Agreement and will included, but not limited to, the projected date of filing a new drug application (NDA) with the FDA and first commercial sale of the Licensed Product."

(b) The Parties agree that, except as explicitly stated herein, all of the terms and conditions of the License Agreement, remain unchanged and in full force and effect.

SECTION 9. Miscellaneous.

(a) Waiver. No term of this Agreement can be waived except by the written consent of the Party waiving compliance.

(b) Transaction Expenses. Each Party is responsible for its own legal, accounting and other transaction costs.

(c) Choice of Law. This Agreement and any dispute arising under it is governed by the laws of the State of California United States of America applicable to agreements negotiated, executed, and performed within California.

(d) Exclusive Forum. The state and federal courts having jurisdiction over Stanford, California, United States of America provide the exclusive forum for any court action between the Parties relating to this Agreement. Trigemina and Tonix submit to the jurisdiction of such courts, and waive any claim that such a court lacks jurisdiction over Trigemina or Tonix or constitutes an inconvenient or improper forum.

(e) Headings. No headings in this Agreement affect its interpretation.

(f) Electronic Copy. The Parties to this document agree that a copy of the original signature (including an electronic copy) may be used for any and all purposes for which the original signature may have been used. The Parties further waive any right to challenge the admissibility or authenticity of this document in a court of law based solely on the absence of an original signature.

(g) Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original but all of which together shall constitute a single instrument.

[Signature page follows]

IN WITNESS WHEREOF, this Agreement is executed as of the date first written above on behalf of the Parties by their duly authorized representatives.

TONIX PHARMACEUTICALS, INC.

By: _____

Name: Seth Lederman, M.D.

Title: Chief Executive Officer

TRIGEMINA, INC.

By: _____

Name: Michael Scaife

Title: Chief Executive Officer

THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY

By: _____

Name:

Title:

EXHIBIT 31.01

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: August 10, 2020

/s/ Seth Lederman
Seth Lederman
Chief Executive Officer

EXHIBIT 31.02

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: August 10, 2020

/s/ Bradley Saenger
Bradley Saenger
Chief Financial Officer

EXHIBIT 32.01

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 June 30, 2020 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: August 10, 2020

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 June 30, 2020 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: August 10, 2020

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