RespireRx Pharmaceuticals Inc.
Form 10-Q
May 21, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

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

For the quarterly period ended March 31, 2018

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

Commission file number: 1-16467

RESPIRERX PHARMACEUTICALS INC.

(Exact name of registrant as specified in its charter)

Delaware	**33-0303583**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

126 Valley Road, Suite C

Glen Rock, New Jersey 07452

(Address of principal executive offices)

(201) 444-4947

(Registrant's telephone number, including area code)

Not applicable

(Former name, former address and former fiscal year, if changed since last report)

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 [X] 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 during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes [X] No [ ]

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See 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 [ ] (Do not check if a smaller reporting company)	Smaller reporting company [X]
	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 [X]

As of May 16, 2018, the Company had 3,123,332, shares of common stock, $0.001 par value, issued and outstanding.

RESPIRERX PHARMACEUTICALS INC.

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Cautionary Note Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q of RespireRx Pharmaceuticals Inc. ("RespireRx" or the "Company") contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 and the Company intends that such forward-looking statements be subject to the safe harbor created thereby. These might include statements regarding the Company's future plans, targets, estimates, assumptions, financial position, business strategy and other plans and objectives for future operations, and assumptions and predictions about research and development efforts, including, but not limited to, preclinical and clinical research design, execution, timing, costs and results, future product demand, supply, manufacturing, costs, marketing and pricing factors.

In some cases, forward-looking statements may be identified by words including "anticipates," "believes," "intends," "estimates," "expects," "plans," "contemplates," "targets," "continues," budgets," "may," and similar expressions and such stat may include, but are not limited to, statements regarding (i) future research plans, expenditures and results, (ii) potential collaborative arrangements, (iii) the potential utility of the Company's proposed products, (iv) reorganization plans, and (v) the need for, and availability of, additional financing.

The forward-looking statements included herein are based on current expectations that involve a number of risks and uncertainties. These forward-looking statements are based on assumptions regarding the Company's business and technology, which involve judgments with respect to, among other things, future scientific, economic, regulatory and competitive conditions, collaborations with third parties, and future business decisions, all of which are difficult or impossible to predict accurately and many of which are beyond the Company's control. Although the Company believes that the assumptions underlying the forward-looking statements are reasonable, actual results may differ materially from those set forth in the forward-looking statements. In light of the significant uncertainties inherent in the forward-looking information included herein, the inclusion of such information should not be regarded as a representation by the Company or any other person that the Company's objectives or plans will be achieved.

Factors that could cause or contribute to such differences include, but are not limited to, regulatory policies or changes thereto, available cash, research and development results, competition from other similar businesses, interest of third parties in collaborations with us, and market and general economic factors. This discussion should be read in conjunction with the condensed consolidated financial statements (unaudited) and notes thereto included in Item 1 of this Quarterly Report on Form 10-Q and the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2017, including the section entitled "Item 1A. Risk Factors." The Company does not intend to update or revise any forward-looking statements to reflect new information, future events or otherwise.

PART I - FINANCIAL INFORMATION

ITEM 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

RESPIRERX PHARMACEUTICALS INC.

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CONDENSED CONSOLIDATED BALANCE SHEETS

	March 31, 2018 (unaudited)	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$266	$84,902
Advance payment on research contract	48,912	48,912
Prepaid expenses, including current portion of long-term prepaid insurance of $14,945 at March 31, 2018 and December 31, 2017	100,655	42,897
Total current assets	149,833	176,711
Long-term prepaid insurance, net of current portion of $14,945 at March 31, 2018 and December 31, 2017	14,323	18,059
Total assets	$164,156	$194,770
LIABILITIES AND STOCKHOLDERS' DEFICIENCY		
Current liabilities:		
Accounts payable and accrued expenses, including $250,733 and $228,939 payable to related parties at March 31, 2018 and December 31, 2017, respectively	$3,048,956	$2,922,013
Accrued compensation and related expenses	758,250	479,300
Convertible notes payable, currently due and payable on demand, including accrued interest of $95,737 and $98,646 at March 31, 2018 and December 31, 2017, respectively (Note 4)	340,737	374,646
Note payable to SY Corporation, including accrued interest of $279,164 and $267,335 at March 31, 2018 and December 31, 2017, respectively (payment obligation currently in default – Note 4)	742,102	583,827
Notes payable to officers, including accrued interest of $32,149 and $26,538 as of March 31, 2018 and December 31, 2017, respectively (Note 4)	187,348	181,738

Other short-term notes payable	64,016	8,630
Total current liabilities	5,141,409	4,550,154
Commitments and contingencies (Note 8)		
Stockholders' deficiency: (Note 6)		
Series B convertible preferred stock, $0.001 par value; $0.6667 per share liquidation preference; aggregate liquidation preference $25,001; shares authorized: 37,500; shares issued and outstanding: 11; common shares issuable upon conversion at 0.00030 common shares per Series B share	21,703	21,703
Common stock, $0.001 par value; shares authorized: 65,000,000; shares issued and outstanding: 3,123,332 and 3,065,261 at March 31, 2018 and December 31, 2017, respectively (Note 2)	3,123	3,065
Additional paid-in capital	157,546,861	157,422,110
Accumulated deficit	(162,548,940)	(161,802,262)
Total stockholders' deficiency	(4,977,253)	(4,355,384)
Total liabilities and stockholders' deficiency	$164,156	$194,770

See accompanying notes to condensed consolidated financial statements (unaudited).

RESPIRERX PHARMACEUTICALS INC.

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CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(Unaudited)

	Three Months Ended March 31,	
	2018	2017
Operating expenses:		
General and administrative, including $207,594 and $631,910 to related parties for the three months ended March 31, 2018 and 2017, respectively	354,843	1,036,301
Research and development, including $122,509 and $289,220 to related parties for the three months ended March 31, 2018 and 2017, respectively	151,334	384,384
Total operating costs and expenses	506,177	1,420,685
Loss from operations	(506,177)	(1,420,685)
Loss on extinguishment of debt in exchange for equity	(66,782)	-
Interest expense, including $5,610 and $3,827 to related parties for the three months ended March 31, 2018 and 2017, respectively	(27,273)	(25,037)
Foreign currency transaction (loss)	(146,446)	(23,422)
Net loss	(746,678)	(1,469,144)
Net loss attributable to common stockholders	$(746,678)	$(1,469,144)
Net loss per common share - basic and diluted	$(0.24)	$(0.68)
Weighted average common shares outstanding - basic and diluted	3,085,263	2,159,267

See accompanying notes to condensed consolidated financial statements (unaudited).

RESPIRERX PHARMACEUTICALS INC.

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CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIENCY

(Unaudited)

Three Months Ended March 31, 2018

	Series B Convertible Preferred Stock		Common Stock		Additional	Accumulated	Total Stockholders'
	Shares	Amount	Shares	Par Value	paid-in Capital	Deficit	Deficiency
Balance, December 31, 2017	37,500	$ 21,703	3,065,261	$ 3,065	$ 157,422,110	$ (161,802,262)	$ (4,355,384)
Fair value of common stock options issued to consultants					14,474		14,474
Common stock issued related to extinguishment of convertible notes			58,071	58	110,277		110,335
Net loss						$(746,678)	$(746,678)
Balance, March 31, 2017	37,500	$21,703	3,123,332	$3,123	$157,546,861	$(162,548,940)	$(4,977,253)

See accompanying notes to condensed consolidated financial statements (unaudited).

RESPIRERX PHARMACEUTICALS INC.

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CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(Unaudited)

	Three Months Ended March 31,	
	2018	2017
Cash flows from operating activities:		
Net loss	$(746,678)	$(1,469,144)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	-	1,707
Loss on extinguishment of convertible debt	66,782	-
Stock-based compensation and fees included in -		
General and administrative expenses	-	494,904
Research and development expenses	-	226,138
Foreign currency transaction loss	146,446	23,422
Changes in operating assets and liabilities:		
(Increase) decrease in -		
Prepaid expenses	(54,021)	(50,270)
Increase (decrease) in -		
Accounts payable and accrued expenses	141,416	190,156
Accrued compensation and related expenses	278,950	281,224
Accrued interest payable	27,083	25,010
Net cash used in operating activities	(140,022)	(221,091)
Cash flows from financing activities:		
Proceeds from sale of common stock units	-	350,000
Borrowings on short-term notes payable	55,386	-
Net cash provided by financing activities	55,386	350,000
Cash and cash equivalents:		
Net (decrease) increase	(84,636)	128,909
Balance at beginning of period	84,902	92,040
Balance at end of period	$266	$220,949

(Continued)

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RESPIRERX PHARMACEUTICALS INC.

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CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(Unaudited)

(Continued)

	Three Months Ended March 31,	
	2018	2017
Supplemental disclosures of cash flow information:		
Cash paid for -		
Interest	$190	$21
Income taxes	$-	$-
Non-cash operating activity:		
Settlement of accounts payable with common stock options	$14,474	$-
Non-cash financing activities:		
Accrual of fees payable to placement agent in connection with the sale of common stock units	$-	$20,000
Extinguishment of Convertible Notes payable	$(43,522)	$-
Issuance of common stock in exchange for extinguishment of Convertible Notes payable	$110,334	$-
Fair value of common stock warrants issued to placement agent in connection with the sale of common stock units	$-	$27,648

See accompanying notes to condensed consolidated financial statements (unaudited).

RESPIRERX PHARMACEUTICALS INC.

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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

Three Months Ended March 31, 2018 and 2017

1. Organization and Basis of Presentation

Organization

RespireRx Pharmaceuticals Inc. ("RespireRx") was formed in 1987 under the name Cortex Pharmaceuticals, Inc. to engage in the discovery, development and commercialization of innovative pharmaceuticals for the treatment of neurological and psychiatric disorders. On December 16, 2015, RespireRx filed a Certificate of Amendment to its Second Restated Certificate of Incorporation with the Secretary of State of the State of Delaware to amend its Second Restated Certificate of Incorporation to change its name from Cortex Pharmaceuticals, Inc. to RespireRx Pharmaceuticals Inc. While developing potential applications for respiratory disorders, RespireRx has retained and expanded its ampakine intellectual property and data with respect to neurological and psychiatric disorders and is considering developing certain potential products in this platform, pending additional financing and/or strategic relationships.

In August 2012, RespireRx acquired Pier Pharmaceuticals, Inc. ("Pier"), which is now its wholly-owned subsidiary.

Basis of Presentation

The condensed consolidated financial statements are of RespireRx and its wholly-owned subsidiary, Pier (collectively referred to herein as the "Company," unless the context indicates otherwise). The condensed consolidated financial statements of the Company at March 31, 2018 and for the three months ended March 31, 2018 and 2017, are

unaudited. In the opinion of management, all adjustments (including normal recurring adjustments) have been made that are necessary to present fairly the condensed consolidated financial position of the Company as of March 31, 2018, the results of its condensed consolidated operations for the three months ended March 31, 2018 and 2017, and its condensed consolidated cash flows for the three months ended March 31, 2018 and 2017. Condensed consolidated operating results for the interim periods presented are not necessarily indicative of the results to be expected for a full fiscal year. The consolidated balance sheet at December 31, 2017 has been derived from the Company's audited consolidated financial statements at such date.

The condensed consolidated financial statements and related notes have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission (the "SEC"). Accordingly, certain information and footnote disclosures normally included in financial statements prepared in accordance with generally accepted accounting principles have been omitted pursuant to such rules and regulations. These condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and other information included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2017, as filed with the SEC.

2. Business

RespireRx is developing dronabinol, a synthetic derivative of a naturally occurring substance in the cannabis plant, otherwise known as Δ9-THC or Δ9-tetrahydrocannabinol, for the treatment of Obstructive Sleep Apnea ("OSA"), a serious respiratory disorder that impacts an estimated 29.4 million people in the United States according to the American Academy of Sleep Medicine ("AASM"), published in August 2016. OSA has been linked to increased risk for hypertension, heart failure, depression, and diabetes, and has an annual economic cost of $162 billion according to the AASM. There are no approved drug treatments for OSA.

RespireRx holds the exclusive world-wide license to a family of patents for the use of cannabinoids, including dronabinol, in the treatment of sleep disordered breathing from the University of Illinois at Chicago ("UIC"). In addition, RespireRx has several extensions and pending applications that, if issued, will extend patent protection for over a decade. UIC recently completed a Phase 2B multi-center, double-blind, placebo-controlled clinical trial of dronabinol in patients with OSA. Entitled Pharmacotherapy of Apnea with Cannabimimetic Enhancement ("PACE"), this study replicated an earlier Phase 2A RespireRx sponsored clinical trial and demonstrated statistically significant improvements in respiration, daytime sleepiness, and patient satisfaction after administration of dronabinol. The results from PACE were published in the journal Sleep Vol. 41. No. 1, 2018.

RespireRx believes that the most direct route to commercialization is to proceed directly to a Phase 3 pivotal trial using the currently available dronabinol formulation (2.5, 5 and 10 mg gel caps) and to then commercialize a RespireRx branded dronabinol capsule ("RBDC").

RespireRx also believes that there are numerous opportunities for reformulation of dronabinol to produce a second generation proprietary, branded product for the treatment of OSA with an improved profile. Therefore, simultaneous with the development of the RBDC, RespireRx plans to develop a proprietary dronabinol formulation to optimize the dose and duration of action for treating OSA.

RespireRx initiated its dronabinol program when it acquired 100% of the issued and outstanding equity securities of Pier effective August 10, 2012 pursuant to an Agreement and Plan of Merger. Pier was formed in June 2007 (under the name SteadySleep Rx Co.) as a clinical stage pharmaceutical company to develop a pharmacologic treatment for OSA and had been engaged in research and clinical development activities.

Prior to the merger, Pier conducted a 21 day, randomized, double-blind, placebo-controlled, dose escalation Phase 2 clinical study in 22 patients with OSA, in which dronabinol produced a statistically significant reduction in the Apnea-Hypopnea Index, the primary therapeutic end-point, and was observed to be safe and well tolerated.

Through the merger, RespireRx gained access to a 2007 Exclusive License Agreement (as amended, the “Old License”) that Pier had entered into with the University of Illinois on October 10, 2007. The Old License covered certain patents and patent applications in the United States and other countries claiming the use of certain compounds referred to as cannabinoids, including dronabinol, for the treatment of sleep-related breathing disorders (including sleep apnea).

Dronabinol is a Schedule III, controlled generic drug with a relatively low abuse potential that is approved by the U.S. Food and Drug Administration (the “FDA”) for the treatment of AIDS-related anorexia and chemotherapy-induced emesis. The use of dronabinol for the treatment of OSA is a novel indication for an already approved drug and, as such, the Company believes that it would only require approval by the FDA of a 505(b)(2) new drug application, an efficient regulatory pathway.

The Old License was terminated effective March 21, 2013, due to the Company’s failure to make a required payment. Subsequently, current management opened negotiations with the University of Illinois, and as a result, the Company entered into a new license agreement (the “2014 License Agreement”) with the University of Illinois on June 27, 2014, the material terms of which were similar to the Old License.

Similar to the Old License, the 2014 License Agreement grants the Company, among other provisions, exclusive rights: (i) to practice certain patents and patent applications, as defined in the 2014 License Agreement, that are held by the University of Illinois; (ii) to identify, develop, make, have made, import, export, lease, sell, have sold or offer for sale any related licensed products; and (iii) to grant sub-licenses of the rights granted in the 2014 License Agreement, subject to the provisions of the 2014 License Agreement. The Company is required under the 2014 License Agreement, among other terms and conditions, to pay the University of Illinois a license fee, royalties, patent costs and certain milestone payments.

Since its formation in 1987, RespireRx has been engaged in the research and clinical development of a class of proprietary compounds known as ampakines, which act to enhance the actions of the excitatory neurotransmitter glutamate at AMPA glutamate receptors. Several ampakines, in both oral and injectable form, are being developed by the Company for the treatment of a variety of breathing and other disorders. In clinical studies, select ampakines have shown preliminary efficacy in central sleep apnea and in the control of respiratory depression produced by opioids, without altering their analgesic effects. In animal models of certain orphan disorders, such as Pompe Disease, Rett's Syndrome and perinatal respiratory distress, certain ampakines have been shown to improve breathing function.

Ampakines also have shown potential as possible therapeutic agents for the treatment of certain neuropsychiatric and neurological disorders. Ampakines have demonstrated positive activity in animal models of Attention Deficit Hyperactivity Disorder ("ADHD"), results that have been extended translationally into statistically significant improvement of symptoms observed in a Phase 2 clinical trial of CX717 in adults with ADHD. At present, the major pharmacotherapies available for ADHD are made up of two types of drugs. Stimulants, such as amphetamine, rapidly produce robust effects, but suffer from side effects typical of stimulants, including tolerance, dependence, withdrawal and abuse. For these reasons, stimulants are scheduled by the FDA. Non-stimulants, such as Straterra® (atomoxetine) tend to be less effective than stimulants with a much longer (approximately 4 – 8 week) latency to onset of action. In a number of animal and human studies, CX717 and other ampakines did not display any stimulant properties typically associated with drugs like amphetamine. In the Phase 2 ADHD clinical trial, statistically significant therapeutic effects were observed within one week. Therefore, we believe ampakines may represent a novel, non-stimulant treatment for ADHD with a more rapid onset of action than alternative non-stimulant treatment options.

The Company owns patents and patent applications, or the rights thereto (see Note 9. Subsequent Events), for certain families of chemical compounds, including ampakines, which claim the chemical structures, their actions as ampakines and their use in the treatment of various disorders. Patents claiming a family of chemical structures, including CX1739 and CX1942, as well as their use in the treatment of various disorders extend through at least 2028. Additional patents claiming a family of chemical structures, including CX717, as well as their use in the treatment of various disorders expired in 2017 in the U.S. and will expire in 2018 internationally.

In 2011, RespireRx conducted a re-evaluation of its strategic focus and determined that clinical development in the area of respiratory disorders, particularly sleep apnea and drug-induced respiratory depression, provided the most

cost-effective opportunities for potential rapid development and commercialization of RespireRx's compounds. Accordingly, RespireRx narrowed its clinical focus at that time and sidelined other avenues of scientific inquiry. This re-evaluation provided the impetus for RespireRx's acquisition of Pier in August 2012, as described above. The Company is re-evaluating the potential of ampakines as drug candidates for non-respiratory central nervous system ("CNS") therapeutic applications, especially considering the data the Company has in respect to its ampakines for certain neuropsychiatric and neurological conditions. Part of the stimulus for the re-evaluation is the March 12, 2018 announcement of the acquisition by Biogen Inc. from Pfizer Inc. of an AMPA receptor modulator which has been in development for schizophrenia, for $75 million upfront and possible $515 million potential milestones and tiered royalties. Additionally, in March 2017, Otsuka Pharmaceutical Co., Ltd. announced that it had agreed to buy Neurovance, Inc. for $100 million plus up to an additional $150 million of contingent payments for a drug in advanced clinical trials for ADHD, a therapeutic area for which one of the Company's ampakines, CX717, has already demonstrated efficacy in a Phase 2 clinical trial, as discussed above.

The Company has continued to implement its respiratory strategic focus, notwithstanding a change in management in March 2013, and has continued its efforts to obtain the capital necessary to fund the clinical activities. As a result of the Company's scientific discoveries and the acquisition of strategic, exclusive license agreements (see Note 8. Commitments and Contingencies-Significant Agreements and Contracts-University of Alberta License Agreement, Note 8. Commitments and Contingencies-Significant Agreements and Contracts-University of Illinois 2014 Exclusive License Agreement and Note 9. Subsequent Events), management believes that the Company is a leader in developing drugs for respiratory disorders, particularly sleep apneas and drug-induced respiratory depression, which is a form of apnea. In addition, the Company recently added to its focus CNS applications other than respiratory, particularly ADHD and spinal cord injury.

On May 9, 2007, RespireRx entered into a license agreement, as subsequently amended, with the University of Alberta granting RespireRx exclusive rights to method of treatment patents held by the University of Alberta claiming the use of ampakines for the treatment of various respiratory disorders. These patents, along with RespireRx's own patents claiming chemical structures, comprise RespireRx's principal intellectual property supporting RespireRx's research and clinical development program in the use of ampakines for the treatment of respiratory disorders. RespireRx has completed pre-clinical studies indicating that several of its ampakines, including CX717, CX1739 and CX1942, were efficacious in treating drug induced respiratory depression caused by opioids or certain anesthetics without offsetting the analgesic effects of the opioids or the anesthetic effects of the anesthetics. In two clinical Phase 2 studies, one of which was published in a peer-reviewed journal, CX717, a predecessor compound to CX1739 and CX1942, antagonized the respiratory depression produced by fentanyl, a potent narcotic, without affecting the analgesia produced by this drug. In addition, RespireRx has conducted a Phase 2A clinical study in which patients with sleep apnea were administered CX1739, RespireRx's lead clinical compound. The results suggested that CX1739 might have use as a treatment for central sleep apnea ("CSA") and mixed sleep apnea, but not OSA. For more information about recent developments regarding the license agreement with the University of Alberta, see Note 9. Subsequent Events.

Going Concern

The Company's condensed consolidated financial statements have been presented on the basis that it is a going concern, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. The Company has incurred net losses of $746,678 for the three months ended March 31, 2018 and $4,291,483 for the fiscal year ended December 31, 2017, and negative operating cash flows of $140,022 for the three months ended March 31, 2018 and $697,009 for the fiscal year ended December 31, 2017. The Company also had a stockholders' deficiency of $4,977,253 at March 31, 2018 and expects to continue to incur net losses and negative operating cash flows for at least the next few years. As a result, management has concluded that there is substantial doubt about the Company's ability to continue as a going concern, and the Company's independent registered public accounting firm, in its report on the Company's consolidated financial statements for the year ended December 31, 2017, expressed substantial doubt about the Company's ability to continue as a going concern.

The Company is currently, and has for some time, been in significant financial distress. It has extremely limited cash resources and current assets and has no ongoing source of sustainable revenue. Management is continuing to address various aspects of the Company's operations and obligations, including, without limitation, debt obligations, financing requirements, intellectual property, licensing agreements, legal and patent matters and regulatory compliance, and has taken steps to continue to raise new debt and equity capital to fund the Company's business activities from both related and unrelated parties.

On March 10, 2017 and March 28, 2017, the Company sold units to investors in the 1st 2017 Unit Offering ("1st 2017 Unit Offering") for aggregate gross proceeds of $350,000, with each unit consisting of one share of the Company's common stock and one common stock purchase warrant to purchase one share of the Company's common stock. Units were sold for $2.50 per unit and the warrants issued in connection with the units were exercisable through December 31, 2021 at a fixed price $2.75 per share of the Company's common stock. The warrants contained a cashless exercise provision and certain blocker provisions preventing exercise if the investor would beneficially own more than 4.99% of the Company's outstanding shares of common stock as a result of such exercise. The warrants were also subject to redemption by the Company at $0.001 per share upon ten (10) days written notice if the Company's common stock closed at 200% or more of the unit purchase price for any five (5) consecutive trading days. The investors were not affiliates of the Company. Investors received an unlimited number of piggy-back registration rights. Investors also received an unlimited number of exchange rights, which were options and not obligations, to exchange such investor's entire investment (and not less than the entire investment) into one or more subsequent equity financings (consisting solely of convertible preferred stock or common stock or units containing preferred stock or common stock and warrants exercisable only into preferred stock or common stock) that would be considered as "permanent equity" under United States Generally Accepted Accounting Principles and the rules and regulations of the United States Securities and Exchange Commission, and therefore classified as stockholders' equity, and excluding any form of debt or convertible debt (each such financing a "Subsequent Equity Financing"). These exchange rights were effective until the earlier of: (i) the completion of any number of subsequent financings aggregating at least $15 million gross proceeds to the Company, or (ii) December 30, 2017. The dollar amount used to determine the amount invested or exchanged into the subsequent financing would have been 1.2 times the amount of the original investment. Under certain circumstances, the ratio might have been 1.4 instead of 1.2. The exchange right did not permit the investors to

exchange into a debt offering or into redeemable preferred stock. In connection with this transaction, Aurora Capital LLC ("Aurora") served as a placement agent and earned $20,000 of cash fees and 8,000 placement agent common stock warrants associated with the closing of 1st 2017 Unit Offering. The cash fees were unpaid as of March 31, 2018.

On July 26, 2017, the Company's Board approved the 2nd 2017 Unit Offering ("2nd 2017 Unit Offering"). The terms of the 2nd 2017 Unit Offering as compared to the terms of the 1st 2017 Unit Offering were such, that it resulted in an exchange of units from the 1st 2017 Unit Offering for new equity securities and warrants of the Company in the 2nd 2017 Unit Offering by the Company by all of the investors in the 1st 2017 Unit Offering.

On August 29, 2017, September 27, 2017, September 28, 2017, October 5, 2017, October 25, 2017, November 29, 2017, December 13, 2017, December 21, 2017, December 22, 2017 and December 29, 2017 the Company sold units to investors in the 2nd 2017 Unit Offering for aggregate gross proceeds of $404,500, with each unit consisting of one share of the Company's common stock and one common stock purchase warrant to purchase one share of the Company's common stock. Units were sold for $1.00 per unit and the warrants issued in connection with the units are exercisable through September 29, 2022 at a fixed price $1.10 per share of the Company's common stock. The warrants contain a cashless exercise provision and certain blocker provisions preventing exercise if the investor would beneficially own more than 4.99% of the Company's outstanding shares of common stock as a result of such exercise. The warrants are also subject to redemption by the Company at $0.001 per share upon ten (10) days written notice if the Company's common stock closes at 250% or more of the unit purchase price for any five (5) consecutive trading days. Investors were not affiliates of the Company. Investors also received an unlimited number of piggy-back registration rights. Investors received an unlimited number of exchange rights, which were options and not obligations, to exchange such investor's entire investment (and not less than the entire investment) into one or more subsequent equity financings (consisting solely of convertible preferred stock or common stock or units containing preferred stock or common stock and warrants exercisable only into preferred stock or common stock) that would be considered as "permanent equity" under United States Generally Accepted Accounting Principles and the rules and regulations of the United States Securities and Exchange Commission, and therefore classified as stockholders' equity, and excluding any form of debt or convertible debt (each such financing a "Subsequent Equity Financing"). These exchange rights were effective until the earlier of: (i) the completion of any number of subsequent financings aggregating at least $15 million gross proceeds to the Company, or (ii) December 30, 2017, and have therefore expired. The dollar amount used to determine the amount invested or exchanged into the subsequent financing would have been 1.2 times the amount of the original investment. Under certain circumstances, the ratio might have been 1.4 instead of 1.2. The exchange right did not permit the investors to exchange into a debt offering or into redeemable preferred stock. There was no placement agent and therefore no fees associated with the 2nd 2017 Unit Offering.

The terms of the 2nd 2017 Unit Offering as compared to the terms of the offering by the Company with closings on December 29, 2016 and December 30, 2016 (the "2nd 2016 Unit Offering"), as discussed in more detail below, and the 1st 2017 Unit Offering, has resulted in an exchange of all of the units from each of the 2nd 2016 Unit Offering and the 1st 2017 Unit Offering into equity securities and warrants of the 2nd 2017 Unit Offering.

The Company is continuing its efforts to raise additional capital in order to be able to pay its liabilities and fund its business activities on a going forward basis, including the pursuit of the Company's planned research and development activities. The Company regularly evaluates various measures to satisfy the Company's liquidity needs, including development and other agreements with collaborative partners and, when necessary, seeking to exchange or restructure the Company's outstanding securities. The Company is evaluating certain changes to its operations and structure to facilitate raising capital from sources that may be interested in financing only discrete aspects of the Company's development programs. Such changes could include a significant reorganization, which may include the formation of one or more subsidiaries into which one or more programs may be contributed. As a result of the Company's current financial situation, the Company has limited access to external sources of debt and equity financing. Accordingly, there can be no assurances that the Company will be able to secure additional financing in the amounts necessary to fully fund its operating and debt service requirements. If the Company is unable to access sufficient cash resources, the Company may be forced to discontinue its operations entirely and liquidate.

3. Summary of Significant Accounting Policies

Principles of Consolidation

The accompanying condensed consolidated financial statements are prepared in accordance with United States generally accepted accounting principles ("GAAP") and include the financial statements of RespireRx and its wholly-owned subsidiary, Pier. Intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions. These estimates and assumptions affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates include, among other things, accounting for potential liabilities, and the assumptions used in valuing stock-based compensation issued for services. Actual amounts may differ from those estimates.

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Concentrations of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents. The Company limits its exposure to credit risk by investing its cash with high quality financial institutions. The Company's cash balances may periodically exceed federally insured limits. The Company has not experienced a loss in such accounts to date.

Cash Equivalents

The Company considers all highly liquid short-term investments with maturities of less than three months when acquired to be cash equivalents.

Fair Value of Financial Instruments

The authoritative guidance with respect to fair value of financial instruments established a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three levels and requires that assets and liabilities carried at fair value be classified and disclosed in one of three categories, as presented below. Disclosure as to transfers into and out of Levels 1 and 2, and activity in Level 3 fair value measurements, is also required.

Level 1. Observable inputs such as quoted prices in active markets for an identical asset or liability that the Company has the ability to access as of the measurement date. Financial assets and liabilities utilizing Level 1 inputs include active-exchange traded securities and exchange-based derivatives.

Level 2. Inputs, other than quoted prices included within Level 1, which are directly observable for the asset or liability or indirectly observable through corroboration with observable market data. Financial assets and liabilities utilizing Level 2 inputs include fixed income securities, non-exchange based derivatives, mutual funds, and fair-value hedges.

Level 3. Unobservable inputs in which there is little or no market data for the asset or liability which requires the reporting entity to develop its own assumptions. Financial assets and liabilities utilizing Level 3 inputs include infrequently-traded, non-exchange-based derivatives and commingled investment funds, and are measured using present value pricing models.

The Company determines the level in the fair value hierarchy within which each fair value measurement falls in its entirety, based on the lowest level input that is significant to the fair value measurement in its entirety. In determining the appropriate levels, the Company performs an analysis of the assets and liabilities at each reporting period end.

The carrying amounts of financial instruments (consisting of cash, cash equivalents, advances on research grants and accounts payable and accrued expenses) are considered by the Company to be representative of the respective fair values of these instruments due to the short-term nature of those instruments. With respect to the note payable to SY Corporation and the convertible notes payable, management does not believe that the credit markets have materially changed for these types of borrowings since the original borrowing date. The Company considers the carrying amounts of the notes payable to officers, inclusive of accrued interest, to be representative of the respective fair values of such instruments due to the short-term nature of those instruments and their terms.

Deferred Financing Costs

Costs incurred in connection with ongoing debt and equity financings, including legal fees, are deferred until the related financing is either completed or abandoned.

Costs related to abandoned debt or equity financings are charged to operations in the period of abandonment. Costs related to completed debt financings are presented as a direct deduction from the carrying amount of the related debt liability (see “Capitalized Financing Costs” below). Costs related to completed equity financings are charged directly to additional paid-in capital.

Capitalized Financing Costs

The Company presents debt issuance costs related to a debt liability in its condensed consolidated balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with the presentation for debt discounts.

Convertible Notes Payable

Original Issuance of Notes and Warrants

The convertible notes sold to investors in 2014 and 2015, which aggregated a total of $579,500, had a fixed interest rate of 10% per annum and are convertible into common stock at a fixed price of $11.3750 per share. The convertible notes have no reset rights or other protections based on subsequent equity transactions, equity-linked transactions or other events. The warrants to purchase 50,945 shares of common stock issued in connection with the sale of the convertible notes were exercisable at a fixed price of $11.3750 per share, provided no right to receive a cash payment, and included no reset rights or other protections based on subsequent equity transactions, equity-linked transactions or other events. The Company determined that there were no embedded derivatives to be identified, bifurcated and valued in connection with this financing.

The maturity date of the notes was extended to September 15, 2016 and included the issuance of 27,936 additional warrants to purchase common stock, exercisable at $11.375 per share of common stock.

2018 Notes Exchange

On February 28, 2018, the Company entered into an exchange agreement with a single holder of two convertible notes. The note holder agreed to exchange an aggregate of $43,552 of principal and accrued interest for 58,071 shares of the Company’s common stock. The closing price of the Company’s common stock on February 28, 2018 was $1.90 per share. As a result of the exchange, $43,552 of convertible notes, inclusive of accrued interest, were cancelled and

$110,334 market value of common stock was issued, resulting in a loss on extinguishment of debt of $66,782.

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2nd 2016 Unit Offering

On December 29, 2016 and December 30, 2016, the Company sold units to investors for aggregate gross proceeds of $185,000, comprised of one share of the Company's common stock and one common stock purchase warrant to purchase one share of the Company's common stock (this 2nd 2016 Unit Offering followed an earlier unit offering in 2016). Units were sold for $1.42 per unit and the warrants issued in connection with the units were exercisable through December 31, 2021 at a fixed price $1.562 per share of the Company's common stock. The warrants contained a cashless exercise provision and certain blocker provisions preventing exercise if the investor would beneficially own more than 4.99% of the Company's outstanding shares of common stock as a result of such exercise. The warrants were also subject to redemption by the Company at $0.001 per share upon ten (10) days written notice if the Company's common stock closed at 200% or more of the unit purchase price for any five (5) consecutive trading days. The investors were not affiliates of the Company. Investors received an unlimited number of piggy-back registration rights. The investors also received an unlimited number of exchange rights to exchange such investor's entire investment (and not less than the entire investment) into subsequent offerings of the Company until the earlier of: (i) the completion of any number of subsequent financings aggregating at least $15 million gross proceeds to the Company, or (ii) December 30, 2017. The dollar amount used to determine the amount invested or exchanged into the subsequent financing was 1.2 times the amount of the original investment. Under certain circumstances, the ratio might have been 1.4 instead of 1.2. The Company evaluated whether the warrants or the exchange rights met criteria to be accounted for as a derivative in accordance with Accounting Standard Codification (ASC) 815 and determined that the derivative criteria were not met. Therefore, the Company determined no bifurcation and separate valuation was necessary and that the warrants and exchange right should be accounted for with the host instrument. The Company then looked to how the host instrument should be classified and determined that it could not, at that time, be classified as permanent equity as there was a potential that the Unit investment amount could be exchanged for debt (convertible or otherwise) or for redeemable preferred stock. Since the exchange right expired within one year, the Company concluded at that time that the Unit investment would be appropriately classified as a current liability. The Unit investment has since been reclassified to "permanent equity." The closing market prices of the Company's common stock on December 29, 2016 and December 30, 2016 were $2.85 and $2.80 respectively.

1st 2017 Unit Offering

On March 10, 2017 and March 28, 2017, the Company sold units to investors for aggregate gross proceeds of $350,000, with each unit consisting of one share of the Company's common stock and one common stock purchase warrant to purchase one share of the Company's common stock (the "1st 2017 Unit Offering"). Units were sold for $2.50 per unit and the warrants issued in connection with the units were exercisable through December 31, 2021 at a fixed price $2.75 per share of the Company's common stock. The warrants contained a cashless exercise provision and certain blocker provisions preventing exercise if the investor would beneficially own more than 4.99% of the Company's outstanding shares of common stock as a result of such exercise. The warrants were also subject to redemption by the Company at $0.001 per share upon ten (10) days written notice if the Company's common stock closed at 200% or more of the unit purchase price for any five (5) consecutive trading days. The investors were not affiliates of the Company. Investors received an unlimited number of piggy-back registration rights. Investors also received an unlimited number of exchange rights, which were options and not obligations, to exchange such investor's

entire investment (and not less than the entire investment) into one or more subsequent equity financings (consisting solely of convertible preferred stock or common stock or units containing preferred stock or common stock and warrants exercisable only into preferred stock or common stock) that would be considered as “permanent equity” under United States Generally Accepted Accounting Principles and the rules and regulations of the United States Securities and Exchange Commission, and therefore classified as stockholders’ equity, and excluding any form of debt or convertible debt (each such financing a “Subsequent Equity Financing”). These exchange rights were effective until the earlier of: (i) the completion of any number of subsequent financings aggregating at least $15 million gross proceeds to the Company, or (ii) December 30, 2017. The dollar amount used to determine the amount invested or exchanged into the subsequent financing was 1.2 times the amount of the original investment. Under certain circumstances, the ratio might have been 1.4 instead of 1.2. The exchange right did not permit the investors to exchange into a debt offering or into redeemable preferred stock, therefore, the 1st 2017 Unit Offering resulted in the issuance of permanent equity. The Company evaluated whether the warrants or the exchange rights met criteria to be accounted for as a derivative in accordance with Accounting Standard Codification Topic (ASC) 815 and determined that the derivative criteria were not met. Therefore, the Company determined no bifurcation and separate valuation was necessary and that the warrants and exchange right should be accounted for with the host instrument. The closing market prices of the Company’s common stock on March 10, 2017 and March 28, 2017 were $4.05 and $3.80 respectively. In connection with this transaction, Aurora Capital LLC (“Aurora”) served as a placement agent and earned $20,000 fees and 8,000 placement agent common stock warrants associated with the closing of 1st 2017 Unit Offering. The fees were unpaid as of March 31, 2018 and have been accrued in accounts payable and accrued expenses and charged against Additional paid-in capital as of March 31, 2017, June 30, 2017, September 30, 2017, December 31, 2017 and March 31, 2018. The placement agent common stock warrants were valued at $27,648 and were accounted for in Additional paid-in capital as of March 31, 2017 and remain valued at that amount as of March 31, 2018. For additional information see Note 6.

On July 26, 2017, the Company's Board approved an offering of securities conducted via private placement (the "2nd 2017 Unit Offering" discussed below) that, because of the terms of the 2nd 2017 Unit Offering as compared to the terms of the 2nd 2016 Unit offering and the 1st 2017 Unit Offering, resulted in an exchange of all of the units from the 2nd 2016 Unit Offering and the 1st 2017 Unit Offering into equity securities of the Company in the 2nd 2017 Unit Offering by all of the investors in the 2nd 2016 Unit Offering and all of the investors in the 1st 2017 Unit Offering. Because all of the investors in the 2nd 2016 Unit Offering exchanged their units into the 2nd 2017 Unit Offering the current non-permanent equity liability as of December 31, 2016 had been reclassified in 2017 as permanent equity capital. Because the 1st 2017 Unit Offering and the 2nd 2017 Unit Offering were both originally accounted for as equity, a reclassification similar to the one effected with respect to the 2nd 2016 Unit Offering was not required.

Extinguishment of Debt

The Company accounts for the extinguishment of debt in accordance with GAAP by comparing the carrying value of the debt to the fair value of consideration paid or assets given up and recognizing a loss or gain in the condensed consolidated statement of operations in the amount of the difference in the period in which such transaction occurs.

Equipment

Equipment is recorded at cost and depreciated on a straight-line basis over their estimated useful lives, which range from three to five years. All equipment was fully depreciated as of March 31, 2018.

Long-Term Prepaid Insurance

Long-term prepaid insurance represents the premium paid in March 2017 for directors' and officers' insurance tail coverage, which is being amortized on a straight-line basis over the policy period of six years. The amount amortizable in the ensuing twelve-month period is recorded as a current asset in the Company's condensed consolidated balance sheet at each reporting date.

Impairment of Long-Lived Assets

The Company reviews its long-lived assets, including long-term prepaid insurance, for impairment whenever events or changes in circumstances indicate that the total amount of an asset may not be recoverable, but at least annually. An

impairment loss is recognized when estimated future cash flows expected to result from the use of the asset and its eventual disposition is less than the asset's carrying amount. The Company has not deemed any long-lived assets as impaired at March 31, 2018.

Stock-Based Compensation

The Company periodically issues common stock and stock options to officers, directors, Scientific Advisory Board members and consultants for services rendered. Such issuances vest and expire according to terms established at the issuance date of each grant.

The Company accounts for stock-based payments to officers and directors by measuring the cost of services received in exchange for equity awards based on the grant date fair value of the awards, with the cost recognized as compensation expense on the straight-line basis in the Company's financial statements over the vesting period of the awards. The Company accounts for stock-based payments to Scientific Advisory Board members and consultants by determining the value of the stock compensation based upon the measurement date at either (a) the date at which a performance commitment is reached, or (b) at the date at which the necessary performance to earn the equity instruments is complete.

Stock grants, which are generally subject to time-based vesting, are measured at the grant date fair value and charged to operations ratably over the vesting period.

Stock options granted to members of the Company's Scientific Advisory Board and to outside consultants are revalued each reporting period until vested to determine the amount to be recorded as an expense in the respective period. As the stock options vest, they are valued on each vesting date and an adjustment is recorded for the difference between the value already recorded and the value on the date of vesting.

The fair value of stock options granted as stock-based compensation is determined utilizing the Black-Scholes option-pricing model, and is affected by several variables, the most significant of which are the life of the equity award, the exercise price of the stock option as compared to the fair market value of the common stock on the grant date, and the estimated volatility of the common stock over the term of the equity award. Estimated volatility is based on the historical volatility of the Company's common stock. The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant. The fair market value of common stock is determined by reference to the quoted market price of the Company's common stock.

Stock options and warrants issued to non-employees as compensation for services to be provided to the Company or in settlement of debt are accounted for based upon the fair value of the services provided or the estimated fair value of the stock option or warrant, whichever can be more clearly determined. Management uses the Black-Scholes option-pricing model to determine the fair value of the stock options and warrants issued by the Company. The Company recognizes this expense over the period in which the services are provided.

For stock options requiring an assessment of value during the three months ended March 31, 2018, the fair value of each stock option award was estimated using the Black-Scholes option-pricing model using the following assumptions:

Risk-free interest rate	2.56	%
Expected dividend yield	0	%
Expected volatility	185.41	%
Expected life	4.7	

For stock options requiring an assessment of value during the three months ended March 31, 2017, the fair value of each stock option award was estimated using the Black-Scholes option-pricing model using the following assumptions:

Risk-free interest rate	1.75	%
Expected dividend yield	0	%
Expected volatility	145.00	%
Expected life	3.6 to 5 years	

The Company recognizes the fair value of stock-based compensation in general and administrative costs and in research and development costs, as appropriate, in the Company's condensed consolidated statements of operations. The Company issues new shares of common stock to satisfy stock option and warrant exercises. There were no stock options exercised during the three months ended March 31, 2018 and 2017.

Income Taxes

The Company accounts for income taxes under an asset and liability approach for financial accounting and reporting for income taxes. Accordingly, the Company recognizes deferred tax assets and liabilities for the expected impact of differences between the financial statements and the tax basis of assets and liabilities.

The Company records a valuation allowance to reduce its deferred tax assets to the amount that is more likely than not to be realized. In the event the Company was to determine that it would be able to realize its deferred tax assets in the future in excess of its recorded amount, an adjustment to the deferred tax assets would be credited to operations in the period such determination was made. Likewise, should the Company determine that it would not be able to realize all or part of its deferred tax assets in the future, an adjustment to the deferred tax assets would be charged to operations in the period such determination was made.

Pursuant to Internal Revenue Code Sections 382 and 383, use of the Company's net operating loss and credit carryforwards may be limited if a cumulative change in ownership of more than 50% occurs within any three-year period since the last ownership change. The Company may have had a change in control under these Sections. However, the Company does not anticipate performing a complete analysis of the limitation on the annual use of the net operating loss and tax credit carryforwards until the time that it anticipates it will be able to utilize these tax attributes.

As of March 31, 2018, the Company did not have any unrecognized tax benefits related to various federal and state income tax matters and does not anticipate any material amount of unrecognized tax benefits within the next 12 months.

The Company is subject to U.S. federal income taxes and income taxes of various state tax jurisdictions. As the Company's net operating losses have yet to be utilized, all previous tax years remain open to examination by Federal authorities and other jurisdictions in which the Company currently operates or has operated in the past.

The Company accounts for uncertainties in income tax law under a comprehensive model for the financial statement recognition, measurement, presentation and disclosure of uncertain tax positions taken or expected to be taken in income tax returns as prescribed by GAAP. The tax effects of a position are recognized only if it is "more-likely-than-not" to be sustained by the taxing authority as of the reporting date. If the tax position is not considered "more-likely-than-not" to be sustained, then no benefits of the position are recognized. As of March 31, 2018, the Company had not recorded any liability for uncertain tax positions. In subsequent periods, any interest and penalties related to uncertain tax positions will be recognized as a component of income tax expense.

Foreign Currency Transactions

The note payable to SY Corporation, which is denominated in a foreign currency (the South Korean Won), is translated into the Company's functional currency (the United States Dollar) at the exchange rate on the balance sheet date. The foreign currency exchange gain or loss resulting from translation is recognized in the related condensed consolidated statements of operations.

Research and Development

Research and development costs include compensation paid to management directing the Company's research and development activities, and fees paid to consultants and outside service providers and organizations (including

research institutes at universities), and other expenses relating to the acquisition, design, development and clinical testing of the Company's treatments and product candidates.

Research and development costs incurred by the Company under research grants are expensed as incurred over the life of the underlying contracts, unless the terms of the contract indicate that a different expensing schedule is more appropriate.

The Company reviews the status of its research and development contracts on a quarterly basis.

On May 6, 2016, the Company made an advance payment to Duke University with respect to the Phase 2A clinical trial of CX1739. At March 31, 2018, an asset balance of $48,912 remained from the advance payment.

License Agreements

Obligations incurred with respect to mandatory payments provided for in license agreements are recognized ratably over the appropriate period, as specified in the underlying license agreement, and are recorded as liabilities in the Company's condensed consolidated balance sheet, with a corresponding charge to research and development costs in the Company's condensed consolidated statement of operations. Obligations incurred with respect to milestone payments provided for in license agreements are recognized when it is probable that such milestone will be reached and are recorded as liabilities in the Company's condensed consolidated balance sheet, with a corresponding charge to research and development costs in the Company's condensed consolidated statement of operations. Payments of such liabilities are made in the ordinary course of business.

Patent Costs

Due to the significant uncertainty associated with the successful development of one or more commercially viable products based on the Company's research efforts and any related patent applications, all patent costs, including patent-related legal and filing fees, are expensed as incurred.

Earnings per Share

The Company's computation of earnings per share ("EPS") includes basic and diluted EPS. Basic EPS is measured as the income (loss) attributable to common stockholders divided by the weighted average common shares outstanding for the period. Diluted EPS is similar to basic EPS but presents the dilutive effect on a per share basis of potential common shares (e.g., warrants and options) as if they had been converted at the beginning of the periods presented, or issuance date, if later. Potential common shares that have an anti-dilutive effect (i.e., those that increase income per share or decrease loss per share) are excluded from the calculation of diluted EPS.

Net income (loss) attributable to common stockholders consists of net income or loss, as adjusted for actual and deemed preferred stock dividends declared, amortized or accumulated.

Loss per common share is computed by dividing net loss by the weighted average number of shares of common stock outstanding during the respective periods. Basic and diluted loss per common share is the same for all periods presented because all warrants and stock options outstanding are anti-dilutive.

At March 31, 2018 and 2017, the Company excluded the outstanding securities summarized below, which entitle the holders thereof to acquire shares of common stock, from its calculation of earnings per share, as their effect would have been anti-dilutive.

	March 31, 2018	2017
Series B convertible preferred stock	11	11
Convertible notes payable	29,957	30,596
Common stock warrants	1,464,415	688,198
Common stock options	4,012,929	1,702,749
Total	5,507,312	2,421,554

Reclassifications

Certain comparative figures in 2017 have been reclassified to conform to the current quarter's presentation. These reclassifications were immaterial, both individually and in the aggregate.

Recent Accounting Pronouncements

Management does not believe that any recently issued, but not yet effective, authoritative guidance, if currently adopted, would have a material impact on the Company's financial statement presentation or disclosures.

4. Notes Payable

Convertible Notes Payable

The convertible notes sold to investors in 2014 and 2015, which aggregated a total of $579,500, had a fixed interest rate of 10% per annum and those that remain outstanding are convertible into common stock at a fixed price of $11.3750 per share. The convertible notes have no reset rights or other protections based on subsequent equity transactions, equity-linked transactions or other events. The warrants to purchase 50,945 shares of common stock issued in connection with the sale of the convertible notes were exercisable at a fixed price of $11.3750 per share, provided no right to receive a cash payment, and included no reset rights or other protections based on subsequent equity transactions, equity-linked transactions or other events. All such warrants have either been exchanged as part of April and May 2016 note and warrant exchange agreements or expired on September 15, 2016. The Company determined that there were no embedded derivatives to be identified, bifurcated and valued in connection with this financing.

The maturity date of the notes was extended to September 15, 2016 and included the issuance of 27,936 additional warrants to purchase common stock, exercisable at $11.375 per share of common stock expiring on September 15, 2016.

The Notes (including those for which default notices have been received) consist of the following at March 31, 2018 and December 31, 2017:

	March 31, 2018	**December 31, 2017**
Principal amount of notes payable	$245,000	$276,000
Add accrued interest payable	95,737	98,646
	$340,737	$374,646

Between October 3, 2016 and October 25, 2016, the Company received several notices of default from holders of convertible notes. The effect of such notices of default was to increase the annual interest rate from 10% to 12% with respect to the convertible notes to which such notices applied. On February 28, 2018, two of such convertible notes were exchanged for common stock of the Company and were extinguished. The Company measured the fair value of the shares of common stock issued to the holder in respect to the extinguishment of the two convertible notes as compared to the aggregate of principal and interest on such notes and recorded a loss of 66,782 which is the amount of the excess fair value paid as compared to the aggregate principal and interest extinguished. The total amount of principal and accrued interest that was due and payable was $43,552. The notes were exchanged for 58,071 shares of the Company’s common stock. The effective exchange rate was $0.75 per share of the Company’s common stock. The

closing price of the Company's common stock on February 28, 2018, was $1.90 as reported by the OTC Markets.

On February 28, 2018, the Board of Directors authorized the offering of a similar exchange arrangement at the same effective exchange rate of $0.75 per share of the Company's common stock to all remaining holders of 10% Convertible Notes (some of which notes are the subject of notices of default and therefore accruing annual interest at 12%); however, as of March 31, 2018, no other holders of notes have elected to exchange their notes on such terms.

As of March 31, 2018, principal and accrued interest on convertible notes subject to default notices totaled $49,807, of which $14,807 was accrued interest. As of December 31, 2017, principal and accrued interest on convertible notes subject to default notices totaled $91,028 of which $25,028 was accrued interest.

As of March 31, 2018, the remaining outstanding convertible notes were convertible into 29,957 shares of the Company's common stock, including 6,700 shares attributable to accrued interest of $95,737 payable as of such date. As of December 31, 2017, the Notes were convertible into 32,941 shares of the Company's common stock, including 8,677 shares attributable to accrued interest of $98,646 payable as of such date. Such notes will continue to accrue interest until exchanged, if exchanged. If such notes are not exchanged, they will continue to accrue interest until either paid or otherwise discharged. There can be no assurance that any of the additional holders of the remaining 10% Convertible Notes will exchange their notes.

Note Payable to SY Corporation Co., Ltd.

On June 25, 2012, the Company borrowed 465,000,000 Won (the currency of South Korea, equivalent to approximately $400,000 United States Dollars) from and executed a secured note payable to SY Corporation Co., Ltd., formerly known as Samyang Optics Co. Ltd. ("SY Corporation"), an approximately 20% common stockholder of the Company at that time. SY Corporation was a significant stockholder and a related party at the time of the transaction but has not been a significant stockholder or related party of the Company subsequent to December 31, 2014. The note accrues simple interest at the rate of 12% per annum and had a maturity date of June 25, 2013. The Company has not made any payments on the promissory note. At June 30, 2013 and subsequently, the promissory note was outstanding and in default, although SY Corporation has not issued a notice of default or a demand for repayment. Management believes that SY Corporation is in default of its obligations under its January 2012 license agreement, as amended, with the Company, but the Company has not yet issued a notice of default. The Company has in the past made several efforts towards a comprehensive resolution of the aforementioned matters involving SY Corporation. During the three months ended March 31, 2018, there were no further communications between the Company and SY Corporation.

The promissory note is secured by collateral that represents a lien on certain patents owned by the Company, including composition of matter patents for certain of the Company's high impact ampakine compounds and the low impact ampakine compounds CX2007 and CX2076, and other related compounds. The security interest does not extend to the Company's patents for its ampakine compounds CX1739 and CX1942, or to the patent for the use of ampakine compounds for the treatment of respiratory depression.

Note payable to SY Corporation consists of the following at March 31, 2018 and December 31, 2017:

	March 31, 2018	**December 31, 2017**
Principal amount of note payable	$399,774	$399,774
Accrued interest payable	279,164	267,335
Foreign currency transaction adjustment	63,164	(83,282)
	$742,102	$583,827

Interest expense with respect to this promissory note was $11,829 and $11,829 for three months ended March 31, 2018 and 2017, respectively.

Advances and Notes Payable to Officers

On January 29, 2016, Dr. Arnold S. Lippa, the Company's Chief Scientific Officer and Chairman of the Board of Directors, advanced $52,600 to the Company for working capital purposes under a demand promissory note with interest at 10% per annum. On September 23, 2016, Dr. Lippa advanced $25,000 to the Company for working capital purposes under a second demand promissory note with interest at 10% per annum. The notes are secured by the assets of the Company. During the three months ended March 31, 2018 and 2017, $2,808 and $1,913 was charged to interest expense with respect to the notes, respectively. In connection with the loan, Dr. Lippa was issued fully vested warrants to purchase 15,464 shares of the Company's common stock, 10,309 of which have an exercise price of $5.1025 per share and 5,155 of which have an exercise price of $4.85 which were the closing prices of the Company's common stock on the respective dates of grant. The warrants expire on January 29, 2019 and September 23, 2019 respectively and may be exercised on a cashless basis.

On February 2, 2016, Dr. James S. Manuso, the Company's Chief Executive Officer and Vice Chairman of the Board of Directors, advanced $52,600 to the Company for working capital purposes under a demand promissory note with interest at 10% per annum. On September 22, 2016, Dr. Manuso, advanced $25,000 to the Company for working capital purposes under a demand promissory note with interest at 10% per annum. The notes are secured by the assets of the Company. During the three months ended March 31, 2018 and 2017, $2,802 and $1,913 was charged to interest expense with respect to the notes, respectively. In connection with the loan, Dr. Manuso was issued fully vested

warrants to purchase 13,092 shares of the Company's common stock, 8,092 of which have an exercise price of $6.5000 per share and 5,000 of which have an exercise price of $5.00, which were the closing market prices of the Company's common stock on the respective dates of grant. The warrants expire on February 2, 2019 and September 22, 2019, respectively, and may be exercised on a cashless basis.

Other Short-Term Notes Payable

Other short-term notes payable at March 31, 2018 and December 31, 2017 consisted of premium financing agreements with respect to various insurance policies. At March 31, 2018, a premium financing agreement was payable in the amount of $63,750, with interest at 8.930% per annum, in ten monthly installments of $6,639. In addition, there was a remaining amount $356 of a short term note payable with respect to an expiring policy. At March 31, 2018, the aggregate amount of the short-term notes payable was $64,016.

5. Settlement and Payment Agreements

On December 9, 2017, the Company accepted offers from certain executive officers, a former executive officer, the independent members of the Board of Directors and two consultants ("Offerees") pursuant to which such Offerees offered to forgive all, or in one case, a portion of their accrued compensation and compensation related amounts owed to them and vendor accounts payable as of September 30, 2017. Also, on December 9, 2017, the Company granted non-qualified stock options ("NQSOs") to the Offerees. The NQSOs immediately vested, have a term of 10 years and have an exercise price of $1.45 per share, which was the closing price on the last trading day before the grant date (Friday, December 8, 2017). The NQSOs were valued using the Black-Scholes option pricing model utilizing the following assumptions: (i) stock price $1.45, (ii) exercise price $1.45, (iii) estimated term 5 years (utilizing the simple method to determine estimated option life when option terms exceed 5 years, which method is to sum the vesting period (in this case 0) and the term (in this case 10 years) and divide by 2), (iv) estimated volatility of 184.92%, (v) risk free rate 1.62% and (vi) dividend yield 0%. The resulting value was $1.396 per NQSO.

The table below summarizes the result of the forgiveness and NQSO grant transactions:

	Dollar amount forgiven	Number of NQSOs granted	Value of NQSOs granted	Gain
Executive Officers, former executive officer, independent members of the Board of Directors	$2,557,083	1,772,056	$2,475,561	$81,522
Consultants	$111,635	77,362	$108,076	$3,559
Total	$2,668,718	1,849,418	$2,583,637	$85,081

6. Stockholders' Deficiency

Preferred Stock

The Company has authorized a total of 5,000,000 shares of preferred stock, par value $0.001 per share. As of March 31, 2018 and December 31, 2017, 1,250,000 shares were designated as 9% Cumulative Convertible Preferred Stock (non-voting, “9% Preferred Stock”); 37,500 shares were designated as Series B Convertible Preferred Stock (non-voting, “Series B Preferred Stock”); 205,000 shares were designated as Series A Junior Participating Preferred Stock (non-voting, “Series A Junior Participating Preferred Stock”); and 1,700 shares were designated as Series G 1.5% Convertible Preferred Stock. Accordingly, as of March 31, 2018 and December 31, 2017, 3,505,800 shares of preferred stock were undesignated and may be issued with such rights and powers as the Board of Directors may designate.

There were no shares of 9% Preferred Stock, Series A Junior Participating Preferred Stock, or Series G 1.5% Convertible Preferred Stock outstanding as of March 31, 2018 and December 31, 2017.

Series B Preferred Stock outstanding as of March 31, 2018 and December 31, 2017 consisted of 37,500 shares issued in a May 1991 private placement. Each share of Series B Preferred Stock is convertible into approximately 0.00030 shares of common stock at an effective conversion price of $2,208.375 per share of common stock, which is subject to adjustment under certain circumstances. As of March 31, 2018 and December 31, 2017, the shares of Series B Preferred Stock outstanding are convertible into 11 shares of common stock. The Company may redeem the Series B Preferred Stock for $25,001, equivalent to $0.6667 per share of Series B Preferred Stock, an amount equal to its liquidation preference, at any time upon 30 days prior notice.

Common Stock

Company has 70,000,000 authorized shares of stock, consisting of 65,000,000 shares designated as common stock, par value $0.001 per share, and 5,000,000 shares designated as preferred stock, par value $0.001 per share.

1st 2017 Unit Offering

On March 10, 2017 and March 28, 2017, the Company sold units to investors for aggregate gross proceeds of $350,000, with each unit consisting of one share of the Company's common stock and one common stock purchase warrant to purchase one share of the Company's common stock (the "1st 2017 Unit Offering"). Units were sold for $2.50 per unit and the warrants issued in connection with the units were exercisable through December 31, 2021 at a fixed price $2.75 per share of the Company's common stock. The warrants contained a cashless exercise provision and certain blocker provisions preventing exercise if the investor would beneficially own more than 4.99% of the Company's outstanding shares of common stock as a result of such exercise. The warrants were also subject to redemption by the Company at $0.001 per share upon ten (10) days written notice if the Company's common stock closed at 200% or more of the unit purchase price for any five (5) consecutive trading days. Investors were not affiliates of the Company. The investors received an unlimited number of piggy-back registration rights. Investors also received an unlimited number of exchange rights, which were options and not obligations, to exchange such investor's entire investment (and not less than the entire investment) into one or more subsequent equity financings (consisting solely of convertible preferred stock or common stock or units containing preferred stock or common stock and warrants exercisable only into preferred stock or common stock) that would be considered as "permanent equity" under United States Generally Accepted Accounting Principles and the rules and regulations of the United States Securities and Exchange Commission, and therefore classified as stockholders' equity, and excluding any form of debt or convertible debt (each such financing a "Subsequent Equity Financing"). These exchange rights were effective until the earlier of: (i) the completion of any number of subsequent financings aggregating at least $15 million gross proceeds to the Company, or (ii) December 30, 2017. The dollar amount used to determine the amount invested or exchanged into the subsequent financing would be 1.2 times the amount of the original investment. Under certain circumstances, the ratio might have been 1.4 instead of 1.2. The exchange right did not permit the investors to exchange into a debt offering or into redeemable preferred stock, therefore, unlike the 2nd 2016 Unit Offering, the 2017 Unit Offering resulted in the issuance of permanent equity. The Company evaluated whether the warrants or the exchange rights met criteria to be accounted for as a derivative in accordance with Accounting Standard Codification Topic (ASC) 815 and determined that the derivative criteria were not met. Therefore, the Company determined no bifurcation and separate valuation was necessary and that the warrants and exchange right should be accounted for with the host instrument. The closing market prices of the Company's common stock on March 10, 2017 and March 28, 2017 were $4.05 and $3.80 respectively. In connection with this transaction, Aurora Capital LLC ("Aurora") served as a placement agent and earned $20,000 fees and 8,000 placement agent common stock warrants associated with the closing of 1st 2017 Unit Offering. The fees were unpaid as of March 31, 2018 and have been accrued in accounts payable and accrued expenses and charged against Additional paid-in capital as of March 31, 2017, June 30, 2017, September 30, 2017, December 31, 2017 and March 31, 2018. The placement agent common stock warrants were valued at $27,648 and were accounted for in Additional paid-in capital as of March 31, 2017 and remain valued at that amount as of March 31, 2018.

On July 26, 2017, the Company's Board approved an offering of securities conducted via private placement (the "2nd 2017 Unit Offering" described below) that, because of the terms of the 2nd 2017 Unit Offering as compared to the terms of the 2nd 2016 Unit offering and the 1st 2017 Unit Offering, resulted in an exchange of all of the units from the 2nd 2016 Unit Offering and the 1st 2017 Unit Offering into equity securities of the Company in the 2nd 2017 Unit Offering by all of the investors in the 2nd 2016 Unit Offering and all of the investors in the 1st 2017 Unit Offering. Because all of the investors in the 2nd 2016 Unit Offering exchanged their units into the 2nd 2017 Unit Offering the current non-permanent equity liability as of December 31, 2016 has been reclassified in 2017 as permanent equity capital. Because the 1st 2017 Unit Offering and the 2nd 2017 Unit Offering were both originally accounted for as equity, no reclassification was required.

2nd 2017 Unit Offering

On August 29, 2017, September 27, 2017, September 28, 2017, October 5, 2017, October 25, 2017, November 29, 2017, December 13, 2017, December 21, 2017, December 22, 2017 and December 29, 2017 the Company sold units in the 2nd 2017 Unit Offering to investors for aggregate gross proceeds of $404,500, with each unit consisting of one share of the Company's common stock and one common stock purchase warrant to purchase one share of the Company's common stock. Units were sold for $1.00 per unit and the warrants issued in connection with the units are exercisable through September 29, 2022 at a fixed price $1.10 per share of the Company's common stock. The warrants contain a cashless exercise provision and certain blocker provisions preventing exercise if the investor would beneficially own more than 4.99% of the Company's outstanding shares of common stock as a result of such exercise. The warrants are also subject to redemption by the Company at $0.001 per share upon ten (10) days written notice if the Company's common stock closes at 250% or more of the unit purchase price for any five (5) consecutive trading days. The investors were not affiliates of the Company. Investors received an unlimited number of piggy-back registration rights. Investors also received an unlimited number of exchange rights, which were options and not obligations, to exchange such investor's entire investment (and not less than the entire investment) into one or more subsequent equity financings (consisting solely of convertible preferred stock or common stock or units containing preferred stock or common stock and warrants exercisable only into preferred stock or common stock) that would be considered as "permanent equity" under United States Generally Accepted Accounting Principles and the rules and regulations of the United States Securities and Exchange Commission, and therefore classified as stockholders' equity, and excluding any form of debt or convertible debt (each such financing a "Subsequent Equity Financing" as in the 1st 2017 Unit Offering). These exchange rights were effective until the earlier of: (i) the completion of any number of subsequent financings aggregating at least $15 million gross proceeds to the Company, or (ii) December 30, 2017 and have therefore expired. The dollar amount used to determine the amount invested or exchanged into the subsequent financing would have been 1.2 times the amount of the original investment. Under certain circumstances, the ratio might have been 1.4 instead of 1.2. The exchange right did not permit the investors to exchange into a debt offering or into redeemable preferred stock, therefore, unlike the 2nd 2016 Unit Offering, the 2nd 2017 Unit Offering resulted in the issuance of permanent equity. All exchange rights have expired as of December 30, 2017. The Company evaluated whether the warrants or the exchange rights met criteria to be accounted for as a derivative in accordance with Accounting Standard Codification Topic (ASC) 815 and determined that the derivative criteria were not met. Therefore, the Company determined no bifurcation and separate valuation was necessary and that the warrants and exchange right should be accounted for with the host instrument. The closing market prices of the Company's common stock on August 29, 2017, September 27, 2017, September 28, 2017, October 5, 2017, October 25, 2017, November 29, 2017, December 13, 2017, December 21, 2017, December 22, 2017 and December 29, 2017 were $1.00, $1.40, $1.40, $1.50, $0.80, $1.05, $1.45, $1.51, $1.45 and $1.14, respectively. There was no placement agent and therefore no fees associated with the 2nd 2017 Unit Offering.

The terms of the 2nd 2017 Unit Offering, as compared to the terms of the 2nd 2016 Unit Offering and the 1st 2017 Unit Offering, resulted in an exchange of all of the units from each of the 2nd 2016 Unit Offering and the 1st 2017 Unit Offering into equity securities of the 2nd 2017 Unit Offering. The 1st 2017 Unit Offering and the 2nd 2017 Unit Offering were both originally accounted for as equity.

Common Stock Warrants

Information with respect to the issuance and exercise of common stock purchase warrants in connection with the Convertible Note Payable and Warrant Purchase Agreement, and Notes Payable to Officers, is provided at Note 4.

A summary of warrant activity for the three months ended March 31, 2018 is presented below.

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in Years)
Warrants outstanding at December 31, 2017	1,464,415	$2.68146	
Issued	-	-	
Warrants outstanding at March 31, 2018	1,464,415	$2.68146	4.59
Warrants exercisable at December 31, 2017	1,464,415	$2,68146	4.88
Warrants exercisable at March 31, 2018	1,464,415	$2.68146	4.59

The exercise prices of common stock warrants outstanding and exercisable are as follows at March 31, 2018:

Exercise Price	Warrants Outstanding (Shares)	Warrants Exercisable (Shares)	Expiration Date
$1.0000	916,217	916,217	September 20, 2022
$1.2870	41,002	41,002	April 17, 2019
$1.5620	130,284	130,284	December 31, 2021
$2.7500	8,000	8000	September 20, 2022
$4.8500	5,155	5,155	September 23, 2019
$4.8750	108,594	108,594	September 30, 2020
$5.0000	5,000	5,000	September 22, 2019
$5.1025	10,309	10,309	January 29, 2019
$6.5000	8,092	8,092	February 4, 2019
$6.8348	145,758	145,758	September 30, 2020
$7.9300	86,004	86,004	February 28, 2021
	1,464,415	1,464,415	

Based on a fair market value of $1.3100 per share on March 31, 2018, the intrinsic value of exercisable in-the-money common stock warrants was $284,970 as of March 31, 2018.

A summary of warrant activity for the three months ended March 31, 2017 is presented below.

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in Years)
Warrants outstanding at December 31, 2016	540,198	$4.84842	
Issued	148,000	2.75000	
Warrants outstanding at March 31, 2017	688,198	$4.39715	4.11
Warrants exercisable at December 31, 2016	540,198	$4.84842	3.93
Warrants exercisable at March 31, 2017	688,198	$4.39715	4.11

Based on a fair market value of $3.8000 per share on March 31, 2017, the intrinsic value of exercisable in-the-money common stock warrants was $550,014 as of March 31, 2017.

Stock Options

On March 18, 2014, the stockholders of the Company holding a majority of the votes to be cast on the issue approved the adoption of the Company's 2014 Equity, Equity-Linked and Equity Derivative Incentive Plan (the "2014 Plan"), which had been previously adopted by the Board of Directors of the Company, subject to stockholder approval. The Plan permits the grant of options and restricted stock with respect to up to 325,025 shares of common stock, in addition to stock appreciation rights and phantom stock, to directors, officers, employees, consultants and other service providers of the Company.

On June 30, 2015, the Board of Directors adopted the 2015 Stock and Stock Option Plan (the "2015 Plan"). The 2015 Plan initially provided for, among other things, the issuance of either or any combination of restricted shares of common stock and non-qualified stock options to purchase up to 461,538 shares of the Company's common stock for periods up to ten years to management, members of the Board of Directors, consultants and advisors. The Company has not and does not intend to present the 2015 Plan to stockholders for approval. On August 18, 2015, the Board of Directors increased the number of shares that may be issued under the 2015 Plan to 769,231 shares of the Company's common stock. On March 31, 2016, the Board of Directors further increased the number of shares that may be issued under the 2015 Plan to 1,538,461 shares of the Company's common stock. On January 17, 2017, the Board of Directors further increased the number of shares that may be issued under the 2015 Plan to 3,038,461 shares of the Company's common stock. On December 9, 2017, the Board of Directors further increased the number of shares that may be issued under the 2015 Plan to 6,985,260 shares of the Company's common stock.

Information with respect to the Black-Scholes variables used in connection with the evaluation of the fair value of stock-based compensation is provided at Note 3.

A summary of stock option activity for the three months ended March 31, 2018 is presented below.

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in Years)
Options outstanding at December 31, 2017	3,996,167	$ 3.7868	

Granted	16,762	1.2500	
Expired	-	-	
Forfeited	-	-	
Options outstanding at March 31, 2018	4,012,929	$ 3.7762	6.79
Options exercisable at December 31, 2017	3,996,167	$ 3.7868	
Options exercisable at March 31, 2018	4,007,691	$ 3.7795	6.80

There was no deferred compensation expense for the outstanding and unvested stock options at March 31, 2018.

The exercise prices of common stock options outstanding and exercisable were as follows at March 31, 2018:

Exercise Price	Options Outstanding (Shares)	Options Exercisable (Shares)	Expiration Date
$1.2500	16,762	11,524	December 7, 2022
$1.3500	34,000	34,000	July 28, 2022
$1.4500	1,849,418	1,849,418	December 9, 2027
$1.4500	100,000	100,000	December 9, 2027
$2.0000	285,000	285,000	June 30, 2022
$2.0000	25,000	25,000	July 26, 2022
$3.9000	395,000	395,000	January 17, 2022
$4.5000	7,222	7,222	September 2, 2021
$5.6875	89,686	89,686	June 30, 2020
$5.7500	2,608	2,608	September 12, 2021
$6.4025	27,692	27,692	August 18, 2020
$6.4025	129,231	129,231	August 18, 2022
$6.4025	261,789	261,789	August 18, 2025
$6.8250	8,791	8,791	December 11, 2020
$7.3775	523,077	523,077	March 31, 2021
$8.1250	169,231	169,231	June 30, 2022
$13.0000	7,385	7,385	March 13, 2019
$13.0000	3,846	3,846	April 14, 2019
$13.9750	3,385	3,385	March 14, 2024
$15.4700	7,755	7,755	April 8, 2020
$15.9250	2,462	2,462	February 28, 2024
$16.0500	46,154	46,154	July 17, 2019
$16.6400	1,538	1,538	January 29, 2020
$19.5000	9,487	9,487	July 17, 2022
$19.5000	6,410	6,410	August 10, 2022
	4,012,929	4,007,691	

Based on a fair market value of $1.3100 per share on March 31, 2018, the intrinsic value of exercisable in-the-money options was $691 as of March 31, 2018.

A summary of stock option activity for the three months ended March 31, 2017 is presented below.

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual

			Life (in Years)
Options outstanding at December 31, 2016	1,307,749	$ 7.6515	
Granted	395,000	3.9000	
Expired	-	-	
Forfeited	-	-	
Options outstanding at March 31, 2017	1,702,749	$ 6.7812	5.23
Options exercisable at March 31, 2017	1,505,249	$ 7.1593	5.27
Options exercisable at December 31, 2016	1,307,749	$ 7.6515	

The exercise prices of common stock options outstanding and exercisable were as follows at March 31, 2017:

Exercise Price	Options Outstanding (Shares)	Options Exercisable (Shares)	Expiration Date
$3.9000	395,000	197,500	January 17, 2022
$4.5000	7,222	7,222	September 2, 2021
$5.6875	89,686	89,686	June 30, 2020
$5.7500	2,608	2,608	September 12, 2021
$6.4025	27,692	27,692	August 18, 2020
$6.4025	129,231	129,231	August 18, 2022
$6.4025	261,789	261,789	August 18, 2025
$6.8250	8,791	8,791	December 11, 2020
$7.3775	523,077	523,077	March 31, 2021
$8.1250	169,231	169,231	June 30, 2022
$13.0000	7,385	7,385	March 13, 2019
$13.0000	3,846	3,846	April 14, 2019
$13.9750	3,385	3,385	March 14, 2024
$15.4700	7,755	7,755	April 8, 2020
$15.9250	2,462	2,462	February 28, 2024
$16.2500	46,154	46,154	July 17, 2019
$16.6400	1,538	1,538	January 29, 2020
$19.5000	9,487	9,487	July 17, 2022
$19.500	6,410	6,410	August 10, 2022
	1,702,749	1,505,249	

Based on a fair market value of $3.8000 per share on March 31, 2017, the intrinsic value of exercisable in-the-money common stock options was $0 as of March 31, 2017.

For the three months ended March 31, 2018 and 2017, stock-based compensation costs included in the condensed consolidated statements of operations consisted of general and administrative expenses of $0 and $494,904, respectively, and research and development expenses of $0 and $226,138, respectively.

Pier Contingent Stock Consideration

In connection with the merger transaction with Pier effective August 10, 2012, RespireRx issued 179,747 newly issued shares of its common stock with an aggregate fair value of $3,271,402 ($18.2000 per share), based upon the closing price of RespireRx's common stock on August 10, 2012. The shares of common stock were distributed to stockholders, convertible note holders, warrant holders, option holders, and certain employees and vendors of Pier in

satisfaction of their interests and claims. The common stock issued by RespireRx represented approximately 41% of the 443,205 common shares outstanding immediately following the closing of the transaction.

Pursuant to the terms of the transaction, RespireRx agreed to issue additional contingent consideration, consisting of up to 56,351 shares of common stock, to Pier's former security holders and certain other creditors and service providers (the "Pier Stock Recipients") that received RespireRx's common stock as part of the Pier transaction if certain of RespireRx's stock options and warrants outstanding immediately prior to the closing of the merger were subsequently exercised. In the event that such contingent shares were issued, the ownership percentage of the Pier Stock Recipients, following their receipt of such additional shares, could not exceed their ownership percentage as of the initial transaction date.

The stock options and warrants outstanding at June 30, 2012 were all out-of-the-money on August 10, 2012. During late July and early August 2012, shortly before completion of the merger, the Company issued options to officers and directors at that time to purchase a total of 22,651 shares of common stock exercisable for ten years at $19.5000 per share. By October 1, 2012, these options, as well as the options and warrants outstanding at June 30, 2012, were also out-of-the-money and continued to be out-of-the-money through March 31, 2018.

There were no stock options or warrants exercised subsequent to August 10, 2012 that triggered additional contingent consideration, and the only remaining stock options outstanding that could still trigger the additional contingent consideration remained out-of-the-money through March 31, 2018. As of March 31, 2018, due to the expirations and forfeitures of RespireRx stock options and warrants occurring since August 10, 2012, 6,497 contingent shares of common stock remained issuable under the Pier merger agreement.

The Company concluded that the issuance of any of the contingent shares to the Pier Stock Recipients was remote, as a result of the large spread between the exercise prices of these stock options and warrants as compared to the common stock trading range, the subsequent expiration or forfeiture of most of the options and warrants, the Company's distressed financial condition and capital requirements, and that these stock options and warrants have remained significantly out-of-the-money through March 31, 2018. Accordingly, the Company considered the fair value of the contingent consideration to be immaterial and therefore did not ascribe any value to such contingent consideration. If any such shares are ultimately issued to the former Pier stockholders, the Company will recognize the fair value of such shares as a charge to operations at that time.

Reserved and Unreserved Shares of Common Stock

On January 17, 2017, the Board of Directors of the Company approved the adoption of the Amendment of the Amended and Restated RespireRx Pharmaceuticals, Inc. 2015 Stock and Stock Option Plan (the "2015 Plan"). The Amendment increases the shares issuable under the plan by 1,500,000, from 1,538,461 to 3,038,461. On December 9, 2017, the Board of Directors further increased the number of shares that may be issued under the 2015 Plan to 6,985,260 shares of the Company's common stock.

Other than the change in the number of shares available under the 2015 Plan, no other changes were made to the 2015 Plan by the Amendment.

At March 31, 2018, the Company had 65,000,000 shares of common stock authorized and 3,123,332 shares of common stock issued and outstanding. Furthermore, as of March 31, 2018, the Company had reserved an aggregate of 11 shares for issuance upon conversion of the Series B Preferred Stock; 1,464,415 shares for issuance upon exercise of warrants; 4,012,929 shares for issuance upon exercise of outstanding stock options; 63,236 shares to cover equity grants available for future issuance pursuant to the 2014 Plan; 3,043,050 shares to cover equity grants available for future issuance pursuant to the 2015 Plan; 29,823 shares for issuance upon conversion of the Convertible Notes; and 6,497 shares issuable as contingent shares pursuant to the Pier merger. Accordingly, as of March 31, 2018, the Company had an aggregate of 8,620,000 shares of common stock reserved for issuance and 53,256,668 shares of common stock unreserved and available for future issuance. The Company expects to satisfy its future common stock commitments through the issuance of authorized but unissued shares of common stock.

7. Related Party Transactions

Dr. Arnold S. Lippa and Jeff E. Margolis, officers and directors of the Company since March 22, 2013, have indirect ownership interests and managing memberships in Aurora Capital LLC ("Aurora") through interests held in its members, and Jeff. E. Margolis is also an officer of Aurora. Aurora is a boutique investment banking firm specializing in the life sciences sector that is also a full service brokerage firm.

On March 31, 2013, the Company accrued $85,000 as reimbursement for legal fees incurred by Aurora in conjunction with the removal of the Company's prior Board of Directors on March 22, 2013, which amount has been included in accounts payable and accrued expenses at March 31, 2018 and December 31, 2017.

On June 30, 2015, the Board of Directors of the Company awarded, but did not pay, cash bonuses totaling $215,000, including an aggregate of $195,000 to certain of the Company's executive officers and an aggregate of $20,000 to the independent members of the Company's Board of Directors. The cash bonuses awarded to executive officers were as follows: Dr. Arnold S. Lippa - $75,000; Jeff E. Margolis - $60,000; and Robert N. Weingarten (resigned as an officer and director of the Company in February 2017, but remains a consultant to the Company) - $60,000. The cash bonuses awarded to the two independent members of the Company's Board of Directors were as follows: James E. Sapirstein - $10,000; and Kathryn MacFarlane - $10,000. The cash bonuses were awarded as partial compensation for services rendered by such persons from January 1, 2015 through June 30, 2015. Such amounts of accrued compensation through September 30, 2017 were forgiven on December 9, 2017 when, on the same date certain amounts were granted as options (See Note 7. Related Party Transactions), and therefore such amounts are no longer included in accrued compensation and related expenses as of March 31, 2018 or December 31, 2017.

On June 30, 2015, the Board of Directors also established cash compensation arrangements for certain of the Company's executive officers at the following monthly rates: Dr. Arnold S. Lippa - $12,500; Jeff E. Margolis - $10,000; and Robert N. Weingarten (resigned as an officer and director of the Company in February 2017, but remains a consultant to the Company) - $10,000. In addition, the Company established quarterly cash board fees for the two independent members of the Company's Board of Directors as follows: James E. Sapirstein - $5,000; and Kathryn MacFarlane - $5,000. This compensation was payable in arrears and commenced on July 1, 2015. On August 18, 2015, the cash compensation arrangements for these executive officers were further revised as described below in Note 8. These compensation arrangements have been extended through September 30, 2018.

Both the cash bonuses and the cash monthly compensation were accrued and will not paid until such time as the Board of Directors of the Company determines that sufficient capital has been raised by the Company or is otherwise available to fund the Company's operations on an ongoing basis.

Effective August 18, 2015, Company entered into employment agreements with Dr. Arnold S. Lippa, Robert N. Weingarten and Jeff E. Margolis, which superseded the compensation arrangements previously established for those officers on June 30, 2015, excluding the cash bonuses referred to above.

On February 17, 2017, Robert N. Weingarten resigned as a director and as the Company's Vice President and Chief Financial Officer, but remains a consultant to the Company.

Jeff E. Margolis' employment agreement was amended effective July 1, 2017. The employment agreement amendment called for payment in three installments in cash of the $60,000 bonus granted on June 30, 2015. A minimum of $15,000 was to be payable in cash as follows: (a) $15,000 payable in cash upon the next closing (after July 1, 2017) of any financing in excess of $100,000 (b) $15,000 payable by the end of the following month assuming cumulative closings (beginning with the closing that triggered (a)) in excess of $200,000 and (c) $30,000 payable in cash upon the next closing of any financing in excess of an additional $250,000. The conditions of (a), (b) and (c) above were met as of December 31, 2017, however Mr. Margolis has waived the Company's obligation to make any payments of the cash bonus until the Board of Directors of the Company determines that sufficient capital has been raised by the Company or is otherwise available to fund the Company's operations on an ongoing basis. Obligations through September 30, 2017 were forgiven by Mr. Margolis as described below.

On March 28, 2017, Aurora earned $20,000 of cash fees and 8,000 placement agent common stock warrants associated with the closing of 1st 2017 Unit Offering. The cash fees were unpaid as of March 31, 2018 and have been included in accounts payable and accrued expenses and charged against Additional paid-in capital as of March 31, 2018 and December 31, 2017. The placement agent common stock warrants were valued at $27,648 and were accounted for in Additional paid-in capital as of March 31, 2018 and December 31, 2017.

On December 9, 2017, the Company accepted offers from Dr. Arnold S. Lippa, Dr. James S. Manuso, Jeff E. Margolis, James E. Sapirstein, Kathryn MacFarlane and Robert N. Weingarten (former Chief Financial Officer) pursuant to which such individuals would forgive accrued compensation and related accrued expenses as of September 30, 2017 in the following amounts: $807,497; $878,360; $560,876; $55,000; $55,000 and $200,350 respectively for a total of $2,557,083. On the same date, the Company granted to the same individuals, or designees of such individuals from the 2015 Plan, non-qualified stock options, exercisable for 10 years with an exercise price of $1.45 per share of common stock, among other terms and features as follows: 559,595; 608,704; 388,687; 38114; 38,114 and 138,842 respectively, for options exercisable into a total of 1,772,055 shares of common stock with a total value of $2,475,561.

As a result of his resignation in February 2017, Mr. Weingarten is no longer considered a related party as of March 31, 2018.

A description of advances and notes payable to officers is provided at Note 4.

8. Commitments and Contingencies

Pending or Threatened Legal Actions and Claims

By letter dated May 18, 2018, the Company received notice from counsel claiming to represent TEC Edmonton and The Governors of the University of Alberta, which purports to terminate, effective December 12, 2017, the license agreement dated May 9, 2007 between the Company and The Governors of the University of Alberta. The Company, through its counsel, disputed any grounds for termination and has notified the representative of its intention to invoke Section 13 of that license agreement, which mandates a meeting to be attended by individuals with decision-making authority to attempt in good faith to negotiate a resolution to the dispute. No assurance can be provided that the parties will reach an acceptable resolution and, in light of the early stages of the disagreement, we cannot estimate the possible impact of this disagreement on the Company's operations or business prospects.

By letter dated November 11, 2014, a former director of the Company, who joined the Company's Board of Directors on August 10, 2012 in conjunction with the Pier transaction and who resigned from the Company's Board of Directors on September 28, 2012, asserted a claim for unpaid consulting compensation of $24,000. The Company has not received any further communications from the former director with respect to this matter.

By letter dated February 5, 2016, the Company received a demand from a law firm representing a professional services vendor of the Company alleging an amount due and owing for unpaid services rendered. On January 18, 2017, following an arbitration proceeding, an arbitrator awarded the vendor the full amount sought in arbitration of $146,082. Additionally, the arbitrator granted the vendor attorneys' fees and costs of $47,937. All such amounts have been accrued at March 31, 2018 and December 31, 2017.

By e-mail dated July 21, 2016, the Company received a demand from an investment banking consulting firm that represented the Company in 2012 in conjunction with the Pier transaction alleging that $225,000 is due and owing for unpaid investment banking services rendered. Such amount has been accrued at March 31, 2018 and December 31, 2017.

The Company is periodically the subject of various pending and threatened legal actions and claims. In the opinion of management of the Company, adequate provision has been made in the Company's consolidated financial statements at March 31, 2018, December 31, 2017 and March 31, 2017 with respect to such matters, including, specifically, the matters noted above. The Company intends to vigorously defend itself if any of the matters described above results in the filing of a lawsuit or formal claim.

Significant Agreements and Contracts

Consulting Agreement

Richard Purcell was appointed as the Company's Senior Vice President of Research and Development effective October 15, 2014. Mr. Purcell provides his services to the Company on a month-to-month basis through his consulting firm, DNA Healthlink, Inc., through which the Company has contracted for his services, for a monthly cash fee of $12,500. Additional information with respect to shares of common stock issued to Mr. Purcell is provided at Note 6. Cash compensation expense pursuant to this agreement totaled $37,608 for the three months ended March 31, 2018 and 2017, which is included in research and development expenses in the Company's condensed consolidated statements of operations for such periods.

Employment Agreements

On August 18, 2015, the Company entered into an employment agreement with Dr. James S. Manuso, Ph.D., to be its new President and Chief Executive Officer. Pursuant to the agreement, which is for an initial term through September 30, 2018 (and which will be deemed to be automatically extended, upon the same terms and conditions, for successive periods of one year, unless either party provides written notice of its intention not to extend the term of the agreement at least 90 days prior to the applicable renewal date), Dr. Manuso received an annual base salary of $375,000. Dr. Manuso is also eligible to earn a performance-based annual bonus award of up to 50% of his base salary, based upon the achievement of annual performance goals established by the Board of Directors in consultation with the executive prior to the start of such fiscal year, or any amount at the discretion of the Board of Directors. Additionally, Dr. Manuso was granted stock options to acquire 261,789 shares of common stock of the Company and is eligible to receive additional awards under the Company's Plans in the discretion of the Board of Directors. Dr. Manuso is also entitled to receive, until such time as the Company establishes a group health plan for its employees, $1,200 per month, on a tax-equalized basis, as additional compensation to cover the cost of health coverage and up to $1,000 per month, on a tax-equalized basis, as additional compensation for a term life insurance policy and disability insurance policy. Dr. Manuso is also entitled to be reimbursed for business expenses. Additional information with respect to the stock options granted to Dr. Manuso is provided at Note 6. Cash compensation accrued pursuant to this agreement totaled $103,650 for each of the three months ended March 31, 2018, and 2017, respectively. Such amounts were included in accrued compensation and related expenses in the Company's condensed consolidated balance sheet at March 31, 2018 and 2017, respectively, and in general and administrative expenses in the Company's consolidated statement of operations for the three months ended March 31, 2018 and 2017. On December 9, 2017, Dr. Manuso forgave $878,360 of accrued compensation and related expenses which was the amount owed by the Company as of September 30, 2017, as described in more detail below. On the same date, Dr. Manuso received options to purchase 608,704 shares of common stock, as described in more detail below. Dr. Manuso does not receive any additional compensation for serving as Vice Chairman or a member of on the Board of Directors. Such amounts have not been paid to Dr. Manuso.

On August 18, 2015, concurrently with the hiring of Dr. James S. Manuso as the Company's new President and Chief Executive Officer, Dr. Arnold S. Lippa resigned as the Company's President and Chief Executive Officer. Dr. Lippa continues to serve as the Company's Executive Chairman and as a member of the Board of Directors. Also on August 18, 2015, Dr. Lippa was named Chief Scientific Officer of the Company, and the Company entered into an employment agreement with Dr. Lippa in that capacity. Pursuant to the agreement, which is for an initial term through September 30, 2018 (and which will be deemed to be automatically extended, upon the same terms and conditions, for successive periods of one year, unless either party provides written notice of its intention not to extend the term of the agreement at least 90 days prior to the applicable renewal date), Dr. Lippa received an annual base salary of $300,000. Dr. Lippa is also eligible to earn a performance-based annual bonus award of up to 50% of his base salary, based upon the achievement of annual performance goals established by the Board of Directors in consultation with the executive prior to the start of such fiscal year, or any amount at the discretion of the Board of Directors. Additionally, Dr. Lippa was granted stock options to acquire 30,769 shares of common stock of the Company and is eligible to receive additional awards under the Company's Plans at the discretion of the Board of Directors. Dr. Lippa is also entitled to receive, until such time as the Company establishes a group health plan for its employees, $1,200 per month, on a tax-equalized basis, as additional compensation to cover the cost of health coverage and up to $1,000 per month, on a tax-equalized basis, as reimbursement for a term life insurance policy and disability insurance policy. Dr. Lippa is also entitled to be reimbursed for business expenses. Additional information with respect to the stock options granted to Dr. Lippa is provided at Note 6. Cash compensation accrued pursuant to this agreement totaled $84,900 for each of the three months ended March 31, 2018 and 2017, respectively, which is included in accrued compensation and related expenses in the Company's consolidated balance sheet at March 31, 2018 and 2017, and in research and development expenses in the Company's consolidated statement of operations. Cash compensation accrued to Dr. Lippa for bonuses and under a prior superseded arrangement, while still serving as the Company's President and Chief Executive Officer, totaled $94,758 and was part of the amount forgiven on December 9, 2017 and therefore is no longer included in accrued compensation and related expenses as of March 31, 2018. Dr. Lippa does not receive any additional compensation for serving as Executive Chairman and on the Board of Directors. On December 9, 2017, Dr. Lippa forgave $807,497 of accrued compensation and related expenses which was the amount owed by the Company as of September 30, 2017. On the same date, Dr. Lippa received options to purchase 559,595 shares of common stock, as described in more detail below.

On August 18, 2015, the Company also entered into an employment agreement with Jeff E. Margolis, in his continuing role as Vice President, Secretary and Treasurer. Pursuant to the agreement, which was for an initial term through September 30, 2016 (and which will be deemed to be automatically extended upon the same terms and conditions, for successive periods of one year, unless either party provides written notice of its intention not to extend the term of the agreement at least 90 days prior to the applicable renewal date), Mr. Margolis received an annual base salary of $195,000, and is also eligible to receive performance-based annual bonus awards ranging from $65,000 to $125,000, based upon the achievement of annual performance goals established by the Board of Directors in consultation with the executive prior to the start of such fiscal year, or any amount at the discretion of the Board of Directors. Additionally, Mr. Margolis was granted stock options to acquire 30,769 shares of common stock of the Company and is eligible to receive additional awards under the Company's Plans at the discretion of the Board of Directors. Mr. Margolis is also entitled to receive, until such time as the Company establishes a group health plan for its employees, $1,200 per month, on a tax-equalized basis, as additional compensation to cover the cost of health coverage and up to $1,000 per month, on a tax-equalized basis, as reimbursement for a term life insurance policy and disability insurance policy. Mr. Margolis is also each entitled to be reimbursed for business expenses. Additional information with respect to the stock options granted to Mr. Margolis is provided at Note 6. Cash compensation accrued pursuant to this agreement totaled $80,400 for Mr. Margolis for the three months ended March 31, 2018 and $54,150 for the three months ended March 31, 2017, which is included in accrued compensation and related expenses in the Company's consolidated balance sheet at March 31, 2018 and 2017, and in general and administrative expenses in the Company's consolidated statement of operations. On December 9, 2017, Mr. Margolis forgave $560,876 of accrued compensation and related expenses which was the amount owed by the Company as of September 30, 2017. On the same date, Mr. Margolis received options to purchase 388,687 shares of common stock, as described in more detail below. Cash compensation accrued to Mr. Margolis for bonuses and under prior superseded arrangements totaled $75,806 and was part of the amount forgiven on December 9, 2017 and therefore is no longer included in accrued compensation and related expenses as of March 31, 2018. Mr. Margolis serves as a Director of the Company but does not receive any additional compensation for serving on the Board of Directors.

The employment agreements between the Company and each of Dr. Manuso, Dr. Lippa, and Mr. Margolis, respectively, provided that the payment obligations associated with the first year base salary were to accrue, but no payments were to be made, until at least $2,000,000 of net proceeds from any offering or financing of debt or equity, or a combination thereof, was received by the Company, at which time scheduled payments were to commence. As this financing milestone has not been achieved, Dr. Manuso, Dr. Lippa, and Mr. Margolis (who are each also directors of the Company) have each agreed, effective as of August 11, 2016, to continue to defer the payment of such amounts indefinitely, until such time as the Board of Directors of the Company determines that sufficient capital has been raised by the Company or is otherwise available to fund the Company's operations on an ongoing basis.

Jeff E. Margolis' employment agreement was amended effective July 1, 2017. The employment agreement amendment called for payment in three installments in cash of the $60,000 bonus granted on June 30, 2015. A minimum of $15,000 was to be payable in cash as follows: (a) $15,000 payable in cash upon the next closing (after July 1, 2017) of any financing in excess of $100,000 (b) $15,000 payable by the end of the following month assuming cumulative closings (beginning with the closing that triggered (a)) in excess of $200,000 and (c) $30,000 payable in cash upon the next closing of any financing in excess of an additional $250,000. The conditions of (a), (b) and (c) above were met as of December 31, 2017, however Mr. Margolis has waived the Company's obligation to make any payments of the cash bonus until the Board of Directors of the Company determines that sufficient capital has been raised by the Company or is otherwise available to fund the Company's operations on an ongoing basis. Obligations through September 30, 2017 were forgiven by Mr. Margolis as described in the next paragraph below.

On December 9, 2017, the Company accepted offers from Dr. Arnold S. Lippa, Dr. James S. Manuso, Jeff E. Margolis, James E. Sapirstein, Kathryn MacFarlane and Robert N. Weingarten (former Chief Financial Officer) pursuant to which such individuals would forgive accrued compensation and related accrued expenses as of September 30, 2017 in the following amounts: $807,497, $878,360, $560,876, $55,000, $55,000, and $200,350 respectively for a total of $2,557,083. On the same date, the Company granted to the same individuals, or designees of such individuals from the 2015 Plan, non-qualified stock options, exercisable for 10 years with an exercise price of $1.45 per share of common stock, among other terms and features as follows: 559,595, 608,704, 388,687, 38114, 38,114, and 138,842 respectively, for options exercisable into a total of 1,772,055 shares of common stock with a total value of $2,475,561.

University of California, Irvine License Agreements

The Company entered into a series of license agreements in 1993 and 1998 with the University of California, Irvine ("UCI") that granted the Company proprietary rights to certain chemical compounds that acted as ampakines and to their therapeutic uses. These agreements granted the Company, among other provisions, exclusive rights: (i) to practice certain patents and patent applications, as defined in the license agreement, that were then held by UCI; (ii) to identify, develop, make, have made, import, export, lease, sell, have sold or offer for sale any related licensed products; and (iii) to grant sub-licenses of the rights granted in the license agreements, subject to the provisions of the license agreements. The Company was required, among other terms and conditions, to pay UCI a license fee, royalties, patent costs and certain additional payments.

Under such license agreements, the Company was required to make minimum annual royalty payments of approximately $70,000. The Company was also required to spend a minimum of $250,000 per year to advance the ampakine compounds until the Company began to market an ampakine compound. The commercialization provisions in the agreements with UCI required the Company to file for regulatory approval of an ampakine compound before October 2012. In March 2011, UCI agreed to extend the required date for filing regulatory approval of an ampakine compound to October 2015. During December 2012, the Company informed UCI that it would be unable to make the annual payment due to a lack of funds. The Company believes that this notice, along with its subsequent failure to make its minimum annual payment obligation, constituted a default and termination of the license agreements.

On April 15, 2013, the Company received a letter from UCI indicating that the license agreements between UCI and the Company had been terminated due to the Company's failure to make certain payments required to maintain the agreements. Since the patents covered in these license agreements had begun to expire and the therapeutic uses described in these patents were no longer germane to the Company's new focus on respiratory disorders, the loss of these license agreements is not expected to have a material impact on the Company's current drug development programs. In the opinion of management, the Company has made adequate provision for any liability relating to this matter in its consolidated financial statements at March 31, 2018 and December 31, 2017.

University of Alberta License Agreement

On May 9, 2007, the Company entered into a license agreement, as amended, with the University of Alberta granting the Company exclusive rights to practice patents held by the University of Alberta claiming the use of ampakines for the treatment of various respiratory disorders. The Company agreed to pay the University of Alberta a licensing fee and a patent issuance fee, which were paid, and prospective payments consisting of a royalty on net sales, sublicense fee payments, maintenance payments and milestone payments. The prospective maintenance payments commence on the enrollment of the first patient into the first Phase 2B clinical trial and increase upon the successful completion of the Phase 2B clinical trial. As the Company does not at this time anticipate scheduling a Phase 2B clinical trial in the near term, no maintenance payments to the University of Alberta are currently due and payable, nor are any maintenance payments expected to be due in the near future in connection with the license agreement. See Note 9. Subsequent Events.

Transactions with Biovail Laboratories International SRL

In March 2010, the Company entered into an asset purchase agreement with Biovail Laboratories International SRL ("Biovail"). Pursuant to the asset purchase agreement, Biovail acquired the Company's interests in CX717, CX1763, CX1942 and the injectable dosage form of CX1739, as well as certain of its other ampakine compounds and related intellectual property for use in the field of respiratory depression or vaso-occlusive crises associated with sickle cell disease. The agreement provided the Company with the right to receive milestone payments in an aggregate amount of up to $15,000,000 plus the reimbursement of certain related expenses, conditioned upon the occurrence of particular events relating to the clinical development of certain assets that Biovail acquired. None of these events occurred.

As part of the transaction, Biovail licensed back to the Company certain exclusive and irrevocable rights to some acquired ampakine compounds, other than CX717, an injectable dosage form of CX1739, CX1763 and CX1942, for use outside of the field of respiratory depression or vaso-occlusive crises associated with sickle cell disease. Accordingly, following the transaction with Biovail, the Company retained its rights to develop and commercialize the non-acquired ampakine compounds as a potential treatment for neurological diseases and psychiatric disorders. Additionally, the Company retained its rights to develop and commercialize the ampakine compounds as a potential treatment for sleep apnea disorders, including an oral dosage form of ampakine CX1739.

In September 2010, Biovail's parent corporation, Biovail Corporation, combined with Valeant Pharmaceuticals International in a merger transaction and the combined company was renamed "Valeant Pharmaceuticals International, Inc." ("Valeant"). Following the merger, Valeant and Biovail conducted a strategic and financial review of their product pipeline and, as a result, in November 2010, Biovail announced its intent to exit from the respiratory depression project acquired from the Company in March 2010.

Following that announcement, the Company entered into discussions with Biovail regarding the future of the respiratory depression project. In March 2011, the Company entered into a new agreement with Biovail to reacquire the ampakine compounds, patents and rights that Biovail had acquired from the Company in March 2010. The new agreement provided for potential future payments of up to $15,150,000 by the Company based upon the achievement of certain developments, including new drug application submissions and approval milestones. Biovail is also eligible to receive additional payments of up to $15,000,000 from the Company based upon the Company's net sales of an intravenous dosage form of the compounds for respiratory depression.

At any time following the completion of Phase 1 clinical studies and prior to the end of Phase 2A clinical studies, Biovail retains an option to co-develop and co-market intravenous dosage forms of an ampakine compound as a treatment for respiratory depression and vaso-occlusive crises associated with sickle cell disease. In such an event, the Company would be reimbursed for certain development expenses to date and Biovail would share in all such future development costs with the Company. If Biovail makes the co-marketing election, the Company would owe no further milestone payments to Biovail and the Company would be eligible to receive a royalty on net sales of the compound by Biovail or its affiliates and licensees.

University of Illinois 2014 Exclusive License Agreement

On June 27, 2014, the Company entered into an Exclusive License Agreement (the "2014 License Agreement") with the University of Illinois, the material terms of which were similar to a License Agreement between the parties that had been previously terminated on March 21, 2013. The 2014 License Agreement became effective on September 18, 2014, upon the completion of certain conditions set forth in the 2014 License Agreement, including: (i) the payment by the Company of a $25,000 licensing fee, (ii) the payment by the Company of outstanding patent costs aggregating $15,840, and (iii) the assignment to the University of Illinois of rights the Company held in certain patent applications, all of which conditions were fulfilled.

The 2014 License Agreement granted the Company (i) exclusive rights to several issued and pending patents in numerous jurisdictions and (ii) the non-exclusive right to certain technical information that is generated by the University of Illinois in connection with certain clinical trials as specified in the 2014 License Agreement, all of which relate to the use of cannabinoids for the treatment of sleep related breathing disorders. The Company is developing dronabinol (Δ9-tetrahydrocannabinol), a cannabinoid, for the treatment of OSA, the most common form of sleep apnea.

The 2014 License Agreement provides for various commercialization and reporting requirements commencing on June 30, 2015 and also requires the Company to pay the University of Illinois a license fee, royalties, patent costs and certain milestone payments. The 2014 License Agreement provides for various royalty payments by the Company, including a royalty on net sales of 4%, payment on sub-licensee revenues of 12.5%, and a minimum annual royalty of $100,000 beginning in 2015, which is due and payable on December 31 of each year. The 2017 minimum annual royalty of $100,000 was paid as scheduled in December 2017. In the year after the first application for market approval is submitted to the FDA and until approval is obtained, the minimum annual royalty will increase to $150,000. In the year after the first market approval is obtained from the FDA and until the first sale of a product, the minimum annual royalty payable by the Company will increase to $200,000. In the year after the first commercial sale of a product, the minimum annual royalty will increase to $250,000.

The 2014 License Agreement also provides for certain one-time milestone payments by the Company. A payment of $75,000 is due within five days after any one of the following: (a) dosing of the first patient with a product in a Phase 2 human clinical study anywhere in the world that is not sponsored by the University of Illinois, (b) dosing of the first patient in a Phase 2 human clinical study anywhere in the world with a low dose of dronabinol, or (c) dosing of the first patient in a Phase 1 human clinical study anywhere in the world with a proprietary reformulation of dronabinol. A payment of $350,000 is due within five days after dosing of the first patient with a product in a Phase 3 human clinical trial anywhere in the world. A payment of $500,000 is due within five days after the first new drug application filing with the FDA or a foreign equivalent for a product. A payment of $1,000,000 is due within 12 months after the first commercial sale of a product.

During the three months ended March 31, 2018 and 2017, the Company recorded a charge to operations of $25,000 and $25,000, respectively, with respect to its 2018 and 2017 minimum annual royalty obligation, which is included in research and development expenses in the Company's condensed consolidated statement of operations for the three months ended March 31, 2018 and 2017.

Research Contract with the University of Alberta

On January 12, 2016, the Company entered into a Research Contract with the University of Alberta in order to test the efficacy of ampakines at a variety of dosage and formulation levels in the potential treatment of Pompe Disease, apnea of prematurity and spinal cord injury, as well as to conduct certain electrophysiological studies to explore the ampakine mechanism of action for central respiratory depression. The Company agreed to pay the University of Alberta total consideration of approximately CAD$146,000 (approximately US$111,000), consisting of approximately CAD$85,000 (approximately US$65,000) of personnel funding in cash in four installments during 2016, to provide approximately CAD$21,000 (approximately US$16,000) in equipment, to pay patent costs of CAD$20,000 (approximately US$15,000), and to underwrite additional budgeted costs of CAD$20,000 (approximately US$15,000). As of December 31, 2017, the Company had recorded final amounts payable in respect to this Research Contract of US$16,207 (CAD$21,222) which amount was paid in US dollars in January 2018 and completed the payments under the contract. The conversion to US dollars above utilizes an exchange rate of approximately US$0.76 for every CAD$1.00.

The University of Alberta received matching funds through a grant from the Canadian Institutes of Health Research in support of this research. The Company retained the rights to research results and any patentable intellectual property generated by the research. Dr. John Greer, faculty member of the Department of Physiology, Perinatal Research Centre and Women & Children's Health Research Institute at the University of Alberta collaborated on this research. The studies were completed in 2016.

National Institute of Drug Abuse Agreement

As a result of agreements entered into on October 19, 2015 and January 19, 2016, the Medications Development Program of the National Institute of Drug Abuse ("NIDA") funded and conducted research on the Company's ampakine compounds CX717 and CX1739 to determine their potential usefulness for the treatment of cocaine and methamphetamine addiction and abuse. The Company retains all intellectual property resulting from this research, as well as proprietary and commercialization rights to these compounds.

In general, the ampakines did not produce in rats and mice behavioral effects that are commonly associated with administration of stimulants such as cocaine or amphetamines. Instead, the ampakines reduced the stimulation produced by both of these drugs. The absence of stimulation on the part of the ampakines may confirm their value as potential non-stimulant treatments for ADHD. In addition, the ampakines did not affect the behavior of rats that had been trained to recognize whether they had been administered cocaine or methamphetamine.

Duke University Clinical Trial Agreement

On January 27, 2015, the Company entered into a Clinical Study and Research Agreement (the "Agreement") with Duke University to develop and conduct a protocol for a program of clinical study and research which was amended on October 30, 2015 and further amended on July 28, 2016, which agreement, as amended, resulted in a total amount payable under the Agreement to $678,327. During the three months ended March 31, 2018 and 2017, the Company charged $0 to research and development expenses with respect to work conducted pursuant to the amended Agreement. The clinical trial completed in October 2016 and the Company announced the study results on December 15, 2016.

Sharp Clinical Services, Inc. Agreement

The Company has various agreements with Sharp Clinical Services, Inc. to provide packaging, labeling, distribution and analytical services.

Covance Laboratories Inc. Agreement

On October 26, 2016, the Company entered into a twelve month agreement with Covance Laboratories Inc. to provide compound testing and storage services with respect to CX1739, CX1866 and CX1929 at a total budgeted cost of $35,958. This agreement was renewed in October 2017.

Summary of Principal Cash Obligations and Commitments

The following table sets forth the Company's principal cash obligations and commitments for the next five fiscal years as of March 31, 2018, aggregating $1,034,400. Amounts included in the 2018 column represent amounts contractually due at March 31, 2018 during the remainder of the 2018 fiscal year ending December 31, 2018.

	Payments Due By Year					
	Total	2018	2019	2020	2021	2022
Research and development contracts	$-	$-	$-	$-	$-	$-
Clinical trial agreements	-	-	-	-	-	-
License agreements	475,000	75,000	100,000	100,000	100,000	100,000
Digital media consulting agreement	12,500	12,500				
Employment and consulting agreements (1)	546,900	546,900	-	-	-	-
Total	$1,034,400	$634,400	$100,000	$100,000	$100,000	$100,000

(1) The payment of such amounts has been deferred indefinitely, as described above at “Employment Agreements”.

9. Subsequent Events

On May 18, 2018, the Company received a letter from counsel claiming to represent TEC Edmonton and The Governors of the University of Alberta, which purports to terminate, effective December 12, 2017, the license agreement dated May 9, 2007 (as subsequently amended) between the Company and The Governors of the University of Alberta. The Company, through its counsel, has disputed any grounds for termination and has notified the representative of its intention to invoke Section 13 of that license agreement, which mandates a meeting to be attended by individuals with decision-making authority to attempt in good faith to negotiate a resolution to the dispute. No assurance can be provided that the parties will reach an acceptable resolution and, in light of the early stages of the disagreement, we cannot estimate the possible impact of this disagreement on the Company’s operations or business prospects.

On April 5, 2018, the Board of Directors approved and the Company granted a non-qualified stock option from the 2015 Plan to a vendor, in satisfaction of $124,025 of amounts owed to that vendor (“Vendor Option”). The Vendor Option, which is exercisable into 125,000 shares of common stock at $1.12 per share, which was the closing price of the Company’s common stock on April 5, 2018 as reported by OTC Markets, vested upon grant and is exercisable for five years. The Vendor Option had an estimated value on April 5, 2018, based upon the Black-Scholes option valuation method of $1.081 per share of common stock, or $135,125. The assumptions used for the valuation of the Vendor Options included a stock price and exercise price of $1.12, an annual volatility of 186.07%, a risk-free rate equal to the yield on the five-year Treasury Note of 2.64% and a zero expected dividend yield.

On April 5, 2018, the Board of Directors approved and the Company granted a non-qualified stock option from the 2015 Plan to Robert N. Weingarten (the “Weingarten Option”), the Company’s most recent former Chief Financial Officer who is also a former member of the Company’s Board of Directors, which grant was in connection with Mr. Weingarten’s agreement to forgive $200,350 of accrued compensation and related costs owed to him. The Weingarten Option, which is exercisable into 185,388 shares of common stock at $1.12 per share, which was the closing price of the Company’s common stock on April 5, 2018 as reported by OTC Markets, vested upon grant and is exercisable for five years. The Weingarten Option had an estimated value on April 5, 2018, based upon the Black-Scholes option

valuation method of $1.081 per share of common stock, or $200,404. The assumptions used for the valuation of the Weingarten Option included a stock price and exercise price of $1.12, an annual volatility of 186.07%, a risk-free rate equal to the yield on the five-year Treasury Note of 2.64% and a zero expected dividend yield.

On April 5, 2018, the Company agreed to issue one or more demand promissory notes, in exchange for borrowings up to a maximum principal amount of $100,000 in the aggregate to Arnold S. Lippa and James S. Manuso, the Company's Executive Chairman and Chief Scientific Officer and the Company's Vice Chairman and Chief Executive Officer respectively ("New Officer Notes"). The New Officer Notes bear simple interest at 10% per year. Demand for payment is available only after June 30, 2018. Until then, the principal amount of the New Officer Notes will mandatorily exchange into the first financing by the Company that results in accounting for the financing as an equity financing (consisting solely of convertible preferred stock or common stock or units containing preferred stock or common stock and warrants exercisable only into preferred stock or common stock) that would be considered as "permanent equity" under United States Generally Accepted Accounting Principles and the rules and regulations of the United States Securities and Exchange Commission, and therefore classified within stockholders' equity, but excluding any form of debt or convertible debt or preferred stock redeemable at the discretion of the holder. The principal amount of the New Officer Notes exchanged will be included in determining if the offering's minimum amount, if any, is met. Accrued and unpaid interest may be exchanged into the offering, but is not mandatorily exchangeable and will not be considered in determining if the minimum amount has been met. If no such offering has a first closing prior to June 30, 2018, a demand for payment of the New Officer Notes may be made individually by the holders of the notes.

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

The following discussion and analysis should be read in conjunction with the condensed consolidated financial statements (unaudited) and notes related thereto appearing elsewhere in this document.

Overview

Since its formation in 1987, RespireRx Pharmaceuticals Inc. ("RespireRx") has been engaged in the research and clinical development of a class of compounds referred to as ampakines, which act to enhance the actions of the excitatory neurotransmitter glutamate at AMPA glutamate receptors. Several ampakines, in both oral and injectable form, now are being developed by the Company for the treatment of a variety of breathing and other disorders, particularly sleep apneas and respiratory depression produced by drugs and neural damage. In clinical studies, select ampakines have shown preliminary efficacy in central sleep apnea and in the control of respiratory depression produced by opioids, without altering their analgesic effects. In animal models of orphan disorders, such as Pompe Disease, Rett's Syndrome and perinatal respiratory distress, it has been demonstrated that certain ampakines improve breathing function.

Ampakines also have shown potential as possible therapeutic agents for the treatment of certain neuropsychiatric and neurological disorders. Ampakines have demonstrated positive activity in animal models of Attention Deficit Hyperactivity Disorder ("ADHD"), results that have been extended translationally into statistically significant improvement of symptoms observed in a Phase 2 clinical trial of CX717 in adults with ADHD. At present, the major pharmacotherapies available for ADHD are made up of two types of drugs. Stimulants, such as amphetamine, rapidly produce robust effects, but suffer from side effects typical of stimulants, including tolerance, dependence, withdrawal and abuse. For these reasons, stimulants are scheduled by the FDA. Non-stimulants, such as Straterra® (atomoxetine) tend to be less effective than stimulants with a much longer (approximately 4 – 8 week) latency to onset of action. In a number of animal and human studies, CX717 and other ampakines did not display any stimulant properties typically associated with drugs like amphetamine. In the Phase 2 ADHD clinical trial, statistically significant therapeutic effects were observed within one week. Therefore, we believe ampakines may represent a novel, non-stimulant treatment for ADHD with a more rapid onset of action than alternative non-stimulant treatment options.

This focus on respiratory disorders provided the impetus for RespireRx's acquisition of, Pier Pharmaceuticals, Inc. ("Pier") in August 2012. The acquisition of Pier added the dronabinol cannabinoid program for obstructive sleep apnea described below.

The Company underwent a change in management in March 2013, and since then the Company's current management has continued this strategic focus. More recently, the Company has added a focus to re-evaluate the potential of ampakines for non-respiratory central nervous system ("CNS") therapeutic applications, especially considering data the Company already has with respect to the use of its ampakines as potential treatments for certain neuropsychiatric and neurological conditions. Part of the stimulus for doing so is the March 12, 2018 announcement of the acquisition by Biogen Inc. from Pfizer Inc. of an AMPA receptor modulator which has been in development for schizophrenia, for $75 million upfront and possible $515 million potential milestones and tiered royalties. Additionally, in March 2017, Otsuka Pharmaceutical Co., Ltd. announced that it had agreed to buy Neurovance, Inc. for $100 million plus up to an additional $150 million of contingent payments for a drug in advanced clinical trials for ADHD, a therapeutic area for which one of the Company's ampakines, CX717, has already demonstrated efficacy in a Phase 2 clinical trial. This also includes seeking the capital to fund those efforts. As a result of the Company's scientific discoveries and the acquisition of strategic, exclusive license agreements (see Note 8. Commitments and Contingencies-Significant Agreements and Contracts-University of Alberta License Agreement, Note 8. Commitments and Contingencies-Significant Agreements and Contracts-University of Illinois 2014 Exclusive License Agreement and Note 9. Subsequent Events to the Company's condensed consolidated financial statements as of and for the three months ended March 31, 2018), management believes that the Company is now a leader in the discovery and development of innovative pharmaceuticals for the treatment of respiratory disorders.

There is a substantial unmet need for new drug treatments for breathing disorders. According to a study commissioned by the American Academy of Sleep Medicine, published in August 2016 ("AASM Commissioned Study"), there are approximately 29.4 million adults with obstructive sleep apnea, of which 5.9 million are diagnosed. Sleep apnea places a considerable burden on society and the health care system because of its association with co-morbidities and adverse events ranging from vehicular (for example: cars, trucks, trains, buses) and industrial accidents and loss of productivity to increased risk of cardiopulmonary illness and related death. According to the AASM Commissioned Study, the estimated overall cost of obstructive sleep apnea in the United States in 2015 was $162 billion. No drugs currently are approved for the treatment of sleep apnea.

Even in patients without sleep apneas, the use of drugs such as propofol, used as an anesthetic during surgery, and opioid analgesics such as morphine and oxycodone, used during anesthesia and for the treatment of post-surgical and chronic pain, are well known for producing respiratory depression, which is a form of apnea. In fact, while respiratory depression is the leading cause of death from the overdose of most classes of abused drugs, it also arises during normal, physician-supervised procedures such as surgical anesthesia, post-operative analgesia and as a result of normal outpatient management of pain.

Although opioid antagonists such as naloxone (Narcan) and nalmefene (Revex) can reverse respiratory depression associated with opioids, they have several major shortcomings. First and foremost, these opioid antagonists do not reverse the respiratory depression produced by other classes of drugs often given/taken either alone or in combination with opioids. Second, while these drugs reverse the serious side effects of the opioids, they also dramatically reduce their analgesic effectiveness. Third, the side effects of opioid antagonists are themselves serious and include seizures, agitation, convulsions, tachycardia, hypotension, nausea, and vomiting.

Furthermore, respiratory depression can arise as a result of a number of other illnesses that involve neural and muscular disorders. For example, certain spinal injuries can interfere with normal neural communication between the

brain and the lungs resulting in reduced respiratory capacity. Pompe Disease is an autosomal, recessive, metabolic disorder that damages muscle and nerve cells throughout the body. One of the first symptoms is a progressive decrease in the strength of muscles such as the diaphragm and other muscles required for breathing, and respiratory failure is the most common cause of death. In both of these indications, symptomatic treatment for the respiratory depression is severely lacking.

Accordingly, there is a considerable need for pharmaco-therapeutic agents to (i) treat sleep apnea, (ii) prevent and reverse the respiratory depression produced by different classes of drugs, and (iii) relieve the respiratory depression produced in a number of neurological indications, such as spinal injury and Pompe Disease. The Company currently has two drug platforms, each with a clinical stage compound directed at these needs.

Sleep Apnea

Sleep apnea is a serious disorder in which breathing repeatedly stops long enough to disrupt sleep, and temporarily decreases the amount of oxygen and increases the amount of carbon dioxide in the blood. Apnea is defined by more than five periods per hour of ten seconds or longer without breathing. The repetitive cessation of breathing during sleep has substantial impact on the affected individuals. The disorder is associated with major co-morbidities including excessive daytime sleepiness and increased risk of cardiovascular disease (such as hypertension, stroke and heart failure), diabetes and weight gain. Sleep apnea is often made worse by central nervous system depressants such as opioids, benzodiazepines, barbiturates and alcohol. It is therefore important for these patients to seek therapy.

The most common type of sleep apnea is obstructive sleep apnea ("OSA"), which occurs by narrowing or collapse of the pharyngeal airway during sleep. There is currently no approved pharmacotherapy, and the most common treatment is to use continuous positive airway pressure ("CPAP") delivered via a nasal or full-face mask, as long as patients are able to tolerate the treatment. However, patient acceptance of and compliance with CPAP devices has been reported to be extremely low. Alternative treatments include surgical intervention, dental appliances, hypoglossal nerve stimulation (via surgical implant) and other physical interventions, but these treatments represent only a small portion of the market for OSA treatments. Given the large patient population and the limited treatment options, there is a very large opportunity for pharmacotherapy to treat this disorder.

Central sleep apnea ("CSA"), a less frequently diagnosed type of sleep apnea, is caused by alterations in the brain mechanisms responsible for maintaining normal respiratory drive. CSA is most frequently observed in patients taking chronic opioids and in heart failure patients and is a major correlate for mortality in these patients. There are no therapeutic options for patients with CSA; CPAP is contra-indicated for the treatment of CSA and no drugs are currently approved for this indication.

In addition, many patients present with a pattern of sleep apnea that has both obstructive and central components.

Cannabinoids

RespireRx is developing dronabinol, a synthetic form of a naturally occurring substance in the cannabis plant, otherwise known as Δ9-tetrahydrocannabinol or Δ9-THC, for the treatment of OSA, a serious respiratory disorder that impacts an estimated 29.4 million people in the United States, according to the American Academy of Sleep Medicine, published in August 2016. OSA has been linked to increased risk for hypertension, heart failure, depression, and diabetes, and has an annual economic cost of $162 billion according to the American Academy of Sleep Medicine. There are no approved drug treatments for OSA.

RespireRx holds the exclusive world-wide license to a family of patents for the use of cannabinoids, a family of compounds found naturally in the cannabis plant, including the synthetic cannabinoid dronabinol, in the treatment of sleep disordered breathing from the University of Illinois at Chicago ("UIC"). In addition, RespireRx has several extensions and pending applications that, if issued, will extend patent protection for over a decade. UIC recently completed a Phase 2B multi-center, double-blind, placebo-controlled clinical trial of dronabinol in patients with OSA. Entitled Pharmacotherapy of Apnea with Cannabimimetic Enhancement ("PACE"), this study replicated an earlier Phase 2A RespireRx sponsored clinical trial and demonstrated statistically significant improvements in respiration, daytime sleepiness, and patient satisfaction after administration of dronabinol. The results from PACE were published in the journal Sleep Vol. 41. No. 1, 2018.

RespireRx believes that the most direct route to commercialization is to proceed directly to a Phase 3 pivotal trial using the currently available dronabinol formulation (2.5, 5 and 10 mg gel caps) and to then commercialize a RespireRx branded dronabinol capsule ("RBDC").

The Company also believes that there are numerous opportunities for reformulation of dronabinol to produce a second generation proprietary, branded product for the treatment of OSA with an improved profile. Therefore, simultaneous with its development of the RBDC, RespireRx plans to develop a proprietary dronabinol formulation to optimize the dose and duration of action for treating OSA.

RespireRx initiated its dronabinol program when it acquired 100% of the issued and outstanding equity securities of Pier effective August 10, 2012 pursuant to an Agreement and Plan of Merger. Pier was formed in June 2007 (under the name SteadySleep Rx Co.) as a clinical stage pharmaceutical company to develop a pharmacologic treatment for OSA and had been engaged in research and clinical development activities.

Prior to the merger, Pier conducted a 21 day, randomized, double-blind, placebo-controlled, dose escalation Phase 2 clinical study in 22 patients with OSA, in which dronabinol produced a statistically significant reduction in the Apnea-Hypopnea Index, the primary therapeutic end-point, and was observed to be safe and well tolerated.

Through the merger, RespireRx gained access to a 2007 Exclusive License Agreement (as amended, the "Old License") that Pier had entered into with the University of Illinois on October 10, 2007. The Old License covered certain patents and patent applications in the United States and other countries claiming the use of cannabinoids, including dronabinol, for the treatment of sleep-related breathing disorders (including sleep apnea).

Dronabinol is a Schedule III, controlled generic drug with a relatively low abuse potential that is approved by the U.S. Food and Drug Administration (the "FDA") for the treatment of AIDS-related anorexia and chemotherapy-induced emesis. The use of dronabinol for the treatment of OSA is a novel indication for an already approved drug and, as such, the Company believes that it would only require approval by the FDA of a 505(b)(2) new drug application ("NDA"), an efficient regulatory pathway.

The Old License was terminated effective March 21, 2013, due to the Company's failure to make a required payment. Subsequently, current management opened negotiations with the University of Illinois, and as a result, the Company entered into a new license agreement (the "2014 License Agreement") with the University of Illinois on June 27, 2014, the material terms of which were similar to the Old License.

Similar to the Old License, the 2014 License Agreement grants the Company, among other provisions, exclusive rights: (i) to practice certain patents and patent applications, as defined in the 2014 License Agreement, that are held by the University of Illinois; (ii) to identify, develop, make, have made, import, export, lease, sell, have sold or offer for sale any related licensed products; and (iii) to grant sub-licenses of the rights granted in the 2014 License Agreement, subject to the provisions of the 2014 License Agreement. The Company is required under the 2014 License Agreement, among other terms and conditions, to pay the University of Illinois a license fee, royalties, patent costs and certain milestone payments.

The recently completed PACE trial is described in more detail below in *Recent Developments*.

Drug-induced Respiratory Depression or Drug-induced apnea

Drug-induced respiratory depression ("RD") or drug-induced apnea is a life-threatening condition caused by a variety of depressant drugs, including analgesic, hypnotic, and anesthesia medications. We believe that RD is a leading cause of death resulting from the overdose of some classes of abused drugs, yet it also arises during normal, physician-supervised procedures such as surgical anesthesia and post-operative pain management. For example, in the hospital setting, anesthetics such as propofol are well known for their propensity to produce RD, particularly when combined with opioids. According to data from the National Center for Health Statistics, 48 million surgical inpatient procedures were performed in the United States in 2009. It is notable that, according to the HealthGrades Inc. Patient Safety in American Hospitals Study released in 2011, post-operative respiratory failure produces the third highest number of patient safety events, the fourth highest mortality rate, and the second largest overall excess cost to the Medicare system, when compared to other patient safety indicators. The Company believes that, in these patients, the major risk factor for the appearance of RD is a history of sleep apnea.

In the hospital setting, one of the most serious complications of patient-controlled analgesia is RD and, despite nurses' vigilance, adverse events associated with opioids continue to increase according to a report in the 2016 issue of the journal, Anesthesiology. Drug-induced RD is associated with a high mortality rate relative to other adverse drug events. In post-surgical patients taking opioids for pain management, sleep apnea is a major risk factor for the occurrence of RD. If patients with sleep apnea are receiving combination therapies, they are at even higher risk for complications and extended hospital stays.

Outside the hospital, the primary risk factor for RD is the use of a single opioid in large doses or concomitant use of opioids and sedative agents. Whether due to normal outpatient pain management, or as a result of substance abuse, RD has been reported to be the leading cause of death from drug overdose, with the drug overdose death rate tripling since 1991. In patients chronically consuming opioids, CSA is a major risk factor for overdose and most likely represents an early and sensitive form of opioid induced RD. In August 2017, the Centers for Disease Control and Prevention ("CDC") reported that approximately 42,000 people died in 2016 from opioid overdoses, including prescription opioids and illegal fentanyl and heroin. The CDC reported that the common prescription drugs involved in overdoses were methadone, oxycodone (such as OxyContin®) and hydrocodone (such as Vicodin®). In 2016, the CDC reported that 40% of all US opioid deaths involved a prescription opioid. There were 13,000 heroin deaths in 2015. There are two types of fentanyl, pharmaceutical fentanyl used to manage acute and chronic pain and non-pharmaceutical fentanyl that is illicitly manufactured and is often mixed with heroin or cocaine. The CDC also reported that most of the increases in fentanyl deaths involved the illicit fentanyl and not the pharmaceutical fentanyl.

Drug Abuse

As a result of agreements entered into on October 19, 2015 and January 19, 2016, the Medications Development Program of the National Institute of Drug Abuse ("NIDA") funded and conducted research on the Company's ampakine compounds CX717 and CX1739 to determine their potential usefulness for the treatment of cocaine and methamphetamine addiction and abuse. The Company retains all intellectual property resulting from this research, as well as proprietary and commercialization rights to these compounds.

In general, the ampakines did not produce in rats and mice behavioral effects that are commonly associated with administration of stimulants such as cocaine or amphetamines. Instead, the ampakines reduced the stimulation produced by both of these drugs. The absence of stimulation on the part of the ampakines may confirm their value as potential non-stimulant treatments for ADHD. In addition, the ampakines did not affect the behavior of rats that had been trained to recognize whether they had been administered cocaine or methamphetamine.

Ampakines

RespireRx is developing a class of proprietary compounds known as ampakines, a term used to designate their actions as positive allosteric modulators of the alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid ("AMPA") glutamate receptor. Ampakines are small molecule compounds that enhance the excitatory actions of the neurotransmitter, glutamate at the AMPA receptor complex, which mediates most excitatory transmission in the CNS. These drugs do not have agonistic or antagonistic properties but instead modulate the receptor rate constants for transmitter binding, channel opening, and desensitization

Through an extensive translational research effort from the cellular level through Phase 2 clinical trials, the company has developed a family of ampakines, including CX717, CX1739 and CX1942 that have clinical application in the treatment of CNS-driven respiratory disorders, neurobehavioral disorders, spinal cord injury, neurological diseases, and orphan indications. In particular, we are addressing CNS-driven respiratory disorders that affect millions of people, but for which there are few treatment options and no drug therapies, including opioid induced respiratory disorders, such as apnea (transient cessation of breathing) and hypopnea (transient reduction in breathing). When these symptoms become severe, as in opioid overdose, they are the primary cause of opioid lethality. In addition, we are developing our ampakines for the treatment of disordered breathing and motor impairment resulting from spinal cord injury.

Ampakines also have shown potential as possible therapeutic agents for the treatment of certain neuropsychiatric and neurological disorders. Ampakines have demonstrated positive activity in animal models of ADHD, results that have been extended translationally into statistically significant improvement of symptoms observed in a Phase 2 clinical

trial of CX717 in adults with ADHD. At present, the major pharmacotherapies are made up of two types of drugs. Stimulants, such as amphetamine, rapidly produce robust effects, but suffer from side effects typical of stimulants, including tolerance, dependence, withdrawal and abuse. For these reasons, stimulants are scheduled by the FDA. Non-stimulants, such as Straterra® (atomoxetine) tend to be less effective than stimulants with a much longer (approximately 4 – 8 week) latency to onset of action. In a number of animal and human studies, CX717 and other ampakines did not have stimulant properties associated with drugs like amphetamine. In the Phase 2 ADHD clinical trial, statistically significant therapeutic effects were observed within one week. Therefore, we believe ampakines may represent a novel, non-stimulant treatment for ADHD with a more rapid onset of action than alternative treatment options.

Early preclinical and clinical research suggested that these ampakines might have therapeutic potential for the treatment of memory and cognitive disorders, depression and schizophrenia.

The early ampakines discovered by the Company, Eli Lilly and Company, and others were ultimately abandoned due to the presence of undesirable side effects, particularly convulsive activity. Subsequently, Company scientists discovered a new, chemically distinct series of molecules termed “low impact” as opposed to the “high impact” designation given to the earlier compounds. While these low impact compounds share many pharmacological properties with the high impact compounds, they do not produce convulsive effects in animals. These low impact compounds do not bind to the same molecular site as the high impact compounds and, as a result, do not produce the undesirable electrophysiological and biochemical effects that lead to convulsive activity.

The Company owns patents and patent applications for certain families of chemical compounds that claim the chemical structures, their actions as ampakines and their use in the treatment of various disorders. Patents claiming a family of chemical structures, including CX1739 and CX1942, as well as their use in the treatment of various disorders, extend through at least 2028. Additional patents claiming a family of chemical structures, including CX717, as well as their use in the treatment of various disorders, expired in 2017 in the U.S. and will expire in 2018 internationally. The Company is developing potential market exclusivity strategies for CX717 which may include new patent applications and identifying market opportunities and strategies that may provide exclusivity without patents.

In order to broaden the use of the Company's ampakine technology into the area of respiratory disorders, on May 9, 2007, the Company entered into a license agreement, as subsequently amended, with the University of Alberta granting the Company exclusive rights to practice patents held by the University of Alberta claiming the use of ampakines for the treatment of various respiratory disorders, including drug induced respiratory depression. These patents extend through at least 2028 and, along with the Company's own patents claiming chemical structures, comprise the Company's principal intellectual property supporting the Company's research and clinical development program in the use of ampakines for the treatment of respiratory disorders. For more information about recent developments regarding the license agreement with the University of Alberta, see Part II, Item 1. Legal Proceedings and Note 9. Subsequent Events to our condensed consolidated financial statement as of and for the three months ended March 31, 2018.

The Company has obtained preclinical results indicating that several of its low impact ampakines, including CX717, CX1739 and CX1942, were able to antagonize the respiratory depression caused by opioids, barbiturates and anesthetics without offsetting the analgesic effects of the opioid or the sedative effects of the anesthetics. Dr. John Greer, faculty member of the Department of Physiology, Perinatal Research Centre, and Women & Children's Health Research Institute at the University of Alberta, has shown that these ampakine effects are due to a direct action on neurons in pre-Botzinger's complex, a brain stem region responsible for regulating respiratory drive.

After several Phase 1 and 2 studies to demonstrate safety and tolerability, the first of these low impact compounds, CX717, was tested in two Phase 2A clinical studies to determine its ability to antagonize the respiratory depressant effects of fentanyl, a potent opioid analgesic. In both of these studies, one of which was published in a peer-reviewed journal, CX717 antagonized the respiratory depression produced by fentanyl without altering the analgesia produced by this drug.

The Company owns patents and patent applications for certain families of chemical compounds that claim the chemical structures, their actions as ampakines and their use in the treatment of various disorders. Patents claiming a family of chemical structures, including CX1739 and CX1942, as well as their use in the treatment of various disorders extend through at least 2028. Additional patents claiming a family of chemical structures, including CX717, as well as their use in the treatment of various disorders, expired in 2017 in the U.S. and will expire in 2018 internationally, though certain patents regarding the use of these chemical structures extend through 2028.

Recent Developments

PACE Clinical Trial with Dronabinol

On November 30, 2017, the Company announced the publication by the principal investigators, Dr. Phyllis Zee of Northwestern University and Dr. David Carley of the University of Illinois at Chicago, in the peer-reviewed journal SLEEP, the official publication of the Sleep Research Society, of the positive results of the potentially pivotal, PACE (Pharmacotherapy of Apnea by Cannabimimetic Enhancement) Phase 2B OSA clinical trial, that was fully funded by the National Institutes of Health. The results from PACE were published in the journal Sleep Vol. 41. No. 1, 2018. The results of the PACE clinical trial were previously presented by Dr. Carley at the SLEEP 2017 annual meeting in June 2017. In the PACE trial, dronabinol significantly improved the primary outcome measures of Apnea Hypopnea Index ("AHI"), daytime sleepiness as measured by the Epworth Sleepiness Scale ("ESS"), and overall patient satisfaction as measured by the Treatment Satisfaction Questionnaire for Medications ("TSQM").

The recently completed PACE trial was a fully-blinded, two-center, Phase II, randomized placebo-controlled trial of dronabinol in 56 adult patients with moderate to severe OSA. The PACE trial enrolled 73 subjects of which 56 were evaluable with moderate to severe OSA who met all inclusion and exclusion criteria for the study. At baseline, overall apnea/hypopnea index (AHI) was 25.9±11.3, Epworth Sleepiness Scale score (ESS) was 11.45±3.8, maintenance of wakefulness test (MWT) mean latency was 19.2±11.8 min, body mass index (BMI) was 33.4±5.4 kg/m2 and age was 53.6±9.0 years. By random assignment, 56 adult subjects with BMI<45, Epworth Sleepiness Scale (ESS)>7 and PSG-documented AHI between 15 and 50 received either placebo (N=17), 2.5mg (N=19) or 10.0mg (N=20) of dronabinol daily, one hour before bedtime for 6 weeks. Randomized subjects completed daily self-administration of study drug for 6 weeks and returned to the laboratory every 2 weeks for overnight polysomnography (PSG), physical examination, and completion of clinical study procedures. Repeat in-laboratory PSG followed by maintenance of wakefulness (MWT) testing was completed every 2-weeks during the treatment period. At each visit, the ESS and Treatment Satisfaction Questionnaire for Medications also were completed.

Overall, baseline AHI was 26.0±11.6 (SD) and this was equivalent among all treatment groups. In comparison to placebo, statistically significant end of treatment declines in AHI were observed for both the 2.5 and 10 mg doses (-9.7±4.1, p=0.02 and -13.2±4.0, p=0.001, respectively). Statistically significant declines in ESS were observed for subjects receiving 10 mg dronabinol (-4.0±0.8 units, p=0.001) but not those receiving 2.5 mg or placebo. Subjects receiving 10 mg dronabinol also expressed the greatest overall satisfaction with treatment (p=0.02).

Subjects receiving 10mg/day of dronabinol expressed the highest overall satisfaction with treatment (p=0.04). In comparison to placebo, dronabinol dose-dependently reduced AHI by 10.7±4.4 (p=0.02) and 12.9±4.3 (p=0.003) events/hour at doses of 2.5 and 10 mg/day, respectively. Dronabinol at 10 mg/day reduced ESS score by -3.8±0.8 points from baseline (p<0.0001) and by -2.3±1.2 points in comparison to placebo (p=0.05). Body weights, MWT sleep latencies, gross sleep architecture and overnight oxygenation parameters were unchanged from baseline in any

treatment group. The number and severity of adverse events, and treatment adherence (0.3±0.6 missed doses/week) were equivalent among all treatment groups.

Research Contract with the University of Alberta

On January 12, 2016, the Company entered into a Research Contract with the University of Alberta in order to test the efficacy of ampakines at a variety of dosage and formulation levels in the potential treatment of Pompe Disease, apnea of prematurity and spinal cord injury, as well as to conduct certain electrophysiological studies to explore the ampakine mechanism of action for central respiratory depression. The Company agreed to pay the University of Alberta total consideration of approximately CAD$146,000 (approximately US$108,000), consisting of approximately CAD$85,000 (approximately US$63,000) of personnel funding in cash in four installments during 2016, to provide approximately CAD$21,000 (approximately US$16,000) in equipment, to pay patent costs of CAD$20,000 (approximately US$15,000), and to underwrite additional budgeted costs of CAD$20,000 (approximately US$15,000). As of December 31, 2017, the Company had recorded final amounts payable in respect to this Research Contract of US$16,207 (CAD$21,222) which amount was paid in US dollars on January 24, 2018 and completed the payments under the contract. The conversion to US dollars above utilizes an exchange rate of approximately US$0.76 for every CAD$1.00.

The University of Alberta received matching funds through a grant from the Canadian Institutes of Health Research in support of this research. The Company retains the rights to research results and any patentable intellectual property generated by the research. Dr. John Greer, Ph.D., Chairman of the Company's Scientific Advisory Board and faculty member of the Department of Physiology, Perinatal Research Centre, and Women & Children's Health Research at the University of Alberta, collaborated on this research. The studies were completed in 2016. Any patentable intellectual property developed in the Research Agreement will be covered by the existing license agreement.

Common Stock and Warrant Financings

1st 2017 Unit Offering

On March 10, 2017 and March 28, 2017, the Company sold units to investors for aggregate gross proceeds of $350,000, with each unit consisting of one share of the Company's common stock and one common stock purchase warrant to purchase one share of the Company's common stock (the "1st 2017 Unit Offering"). Units were sold for $2.50 per unit and the warrants issued in connection with the units are exercisable through December 31, 2021 at a fixed price $2.75 per share of the Company's common stock. The warrants contained a cashless exercise provision and certain blocker provisions preventing exercise if the investor would beneficially own more than 4.99% of the Company's outstanding shares of common stock as a result of such exercise. The warrants were also subject to redemption by the Company at $0.001 per share upon ten (10) days written notice if the Company's common stock closed at 200% or more of the unit purchase price for any five (5) consecutive trading days. Investors were not affiliates of the Company. The investors received an unlimited number of piggy-back registration rights. Investors also received an unlimited number of exchange rights, which were options and not obligations, to exchange such investor's entire investment (and not less than the entire investment) into one or more subsequent equity financings (consisting solely of convertible preferred stock or common stock or units containing preferred stock or common stock and warrants exercisable only into preferred stock or common stock) that would be considered as "permanent equity" under United States Generally Accepted Accounting Principles and the rules and regulations of the United States Securities and Exchange Commission, and therefore classified as stockholders' equity, and excluding any form of debt or convertible debt (each such financing a "Subsequent Equity Financing"). These exchange rights were effective until the earlier of: (i) the completion of any number of subsequent financings aggregating at least $15 million gross proceeds to the Company, or (ii) December 30, 2017. The dollar amount used to determine the amount invested or exchanged into the subsequent financing would be 1.2 times the amount of the original investment. Under certain circumstances, the ratio might have been 1.4 instead of 1.2. The exchange right did not permit the investors to exchange into a debt offering or into redeemable preferred stock. The 2017 Unit Offering resulted in the issuance of permanent equity. The Company evaluated whether the warrants or the exchange rights met criteria to be accounted for as a derivative in accordance with Accounting Standard Codification Topic (ASC) 815 and determined that the derivative criteria were not met. Therefore, the Company determined no bifurcation and separate valuation was necessary and that the warrants and exchange right should be accounted for with the host instrument. The closing market prices of the Company's common stock on March 10, 2017 and March 28, 2017 were $4.05 and $3.80 respectively. In connection with this transaction, Aurora Capital LLC ("Aurora") served as a placement agent and earned $20,000 fees and 8,000 placement agent common stock warrants associated with the closing of 1st 2017 Unit Offering. The fees were unpaid as of March 31, 2018 and have been accrued in accounts payable and accrued expenses and charged against Additional paid-in capital as of March 31, 2017, June 30, 2017, September 30, 2017, December 31, 2017 and March

31, 2018. The placement agent common stock warrants were valued at $27,648 and were accounted for in Additional paid-in capital as of March 31, 2017 and remain valued at that amount as of March 31, 2018.

On July 26, 2017, the Company's Board approved an offering of securities conducted via private placement (the "2nd 2017 Unit Offering" described below) that, because of the terms of the 2nd 2017 Unit Offering as compared to the terms of the 2nd 2016 Unit offering and the 1st 2017 Unit Offering, resulted in an exchange of all of the units from the 2nd 2016 Unit Offering and the 1st 2017 Unit Offering into equity securities of the Company in the 2nd 2017 Unit Offering by all of the investors in the 2nd 2016 Unit Offering and all of the investors in the 1st 2017 Unit Offering. The 1st 2017 Unit Offering and the 2nd 2017 Unit Offering were both originally accounted for as equity.

2nd 2017 Unit Offering

On August 29, 2017, September 27, 2017, September 28, 2017, October 5, 2017, October 25, 2017, November 29, 2017, December 13, 2017, December 21, 2017, December 22, 2017 and December 29, 2017 the Company sold units to investors in the 2nd 2017 Unit Offering for aggregate gross proceeds of $404,500, with each unit consisting of one share of the Company's common stock and one common stock purchase warrant to purchase one share of the Company's common stock. Units were sold for $1.00 per unit and the warrants issued in connection with the units are exercisable through September 29, 2022 at a fixed price $1.10 per share of the Company's common stock. The warrants contain a cashless exercise provision and certain blocker provisions preventing exercise if the investor would beneficially own more than 4.99% of the Company's outstanding shares of common stock as a result of such exercise. The warrants are also subject to redemption by the Company at $0.001 per share upon ten (10) days written notice if the Company's common stock closes at 250% or more of the unit purchase price for any five (5) consecutive trading days. The investors in the offering were not affiliates of the Company. Investors also received an unlimited number of piggy-back registration rights. Investors also received an unlimited number of exchange rights, which are options and not obligations, to exchange such investor's entire investment (and not less than the entire investment) into one or more subsequent equity financings (consisting solely of convertible preferred stock or common stock or units containing preferred stock or common stock and warrants exercisable only into preferred stock or common stock) that would be considered as "permanent equity" under United States Generally Accepted Accounting Principles and the rules and regulations of the United States Securities and Exchange Commission, and therefore classified as stockholders' equity, and excluding any form of debt or convertible debt (each such financing a "Subsequent Equity Financing" as in the 1st 2017 Unit Offering). These exchange rights were effective until the earlier of: (i) the completion of any number of subsequent financings aggregating at least $15 million gross proceeds to the Company, or (ii) December 30, 2017 and therefore have expired. The dollar amount used to determine the amount invested or exchanged into the subsequent financing would have been 1.2 times the amount of the original investment. Under certain circumstances, the ratio might have been 1.4 instead of 1.2. The exchange right did not permit the investors to exchange into a debt offering or into redeemable preferred stock. The 2nd 2017 Unit Offering resulted in the issuance of permanent equity.

The Company evaluated whether the warrants or the exchange rights met criteria to be accounted for as a derivative in accordance with Accounting Standard Codification Topic (ASC) 815, and determined that the derivative criteria were not met. Therefore, the Company determined no bifurcation and separate valuation was necessary and the warrants and exchange right should be accounted for with the host instrument. The closing market prices of the Company's common stock on August 29, 2017, September 27, 2017, September 28, 2017, October 5, 2017, October 25, 2017, November 29, 2017, December 13, 2017, December 21, 2017, December 22, 2017 and December 29, 2017 were $1.00, $1.40, $1.40, $1.50, $0.80, $1.05, $1.45, $1.51, $1.45 and $1.14 respectively. There was no placement agent and therefore no fees associated with the 2nd 2017 Unit Offering.

The terms of the 2nd 2017 Unit Offering, as compared to the terms of the 2nd 2016 Unit Offering and the 1st 2017 Unit Offering, were such that all of the units from each of the 2nd 2016 Unit Offering and the 1st 2017 Unit Offering were exchanged into securities of the 2nd 2017 Unit Offering. The 1st 2017 Unit Offering and the 2nd 2017 Unit Offering were both originally accounted for as equity.

The shares of common stock and warrants in each of the private placements discussed above were offered and sold without registration under the Securities Act of 1933, as amended (the “Securities Act”) in reliance on the exemptions provided by Section 4(a)(2) of the Securities Act as provided in Rule 506(b) of Regulation D promulgated thereunder. None of the shares of common stock issued as part of the units, the warrants, the common stock issuable upon exercise of the warrants or any warrants issued to a qualified referral source have been registered under the Securities Act or any other applicable securities laws, and unless so registered, may not be offered or sold in the United States except pursuant to an exemption from the registration requirements of the Securities Act.

Going Concern

The Company's condensed consolidated financial statements have been presented on the basis that it is a going concern, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. The Company has incurred net losses of $746,678 for the three months ended March 31, 2018 and $4,291,483 for the fiscal year ended December 31, 2017, and negative operating cash flows of $140,022 for the three months ended March 31, 2018 and $697,009 for the fiscal year ended December 31, 2017. The Company also had a stockholders' deficiency of $4,977,253 at March 31, 2018 and expects to continue to incur net losses and negative operating cash flows for at least the next few years. As a result, management has concluded that there is substantial doubt about the Company's ability to continue as a going concern, and the Company's independent registered public accounting firm, in its report on the Company's consolidated financial statements for the year ended December 31, 2017, expressed substantial doubt about the Company's ability to continue as a going concern.

The Company is currently, and has for some time, been in significant financial distress. It has limited cash resources and current assets and has no ongoing source of sustainable revenue. Management is continuing to address various aspects of the Company's operations and obligations, including, without limitation, debt obligations, financing requirements, intellectual property, licensing agreements, legal and patent matters and regulatory compliance, and has continued to raise new debt and equity capital to fund the Company's business activities from both related and unrelated parties.

On March 10, 2017 and March 28, 2017, the Company sold units to investors in the 1st 2017 Unit Offering for aggregate gross proceeds of $350,000, with each unit consisting of one share of the Company's common stock and one common stock purchase warrant to purchase one share of the Company's common stock. Units were sold for $2.50 per unit and the warrants issued in connection with the units were exercisable through December 31, 2021 at a fixed price $2.75 per share of the Company's common stock. The warrants contained a cashless exercise provision and certain blocker provisions preventing exercise if the investor would beneficially own more than 4.99% of the Company's outstanding shares of common stock as a result of such exercise. The warrants were also subject to redemption by the Company at $0.001 per share upon ten (10) days written notice if the Company's common stock closed at 200% or more of the unit purchase price for any five (5) consecutive trading days. The investors were not affiliates of the Company. Investors received an unlimited number of piggy-back registration rights. Investors also received an unlimited number of exchange rights, which were options and not obligations, to exchange such investor's entire investment (and not less than the entire investment) into one or more subsequent equity financings (consisting solely of convertible preferred stock or common stock or units containing preferred stock or common stock and warrants exercisable only into preferred stock or common stock) that would be considered as "permanent equity" under United States Generally Accepted Accounting Principles and the rules and regulations of the United States Securities and Exchange Commission, and therefore classified as stockholders' equity, and excluding any form of debt or convertible debt (each such financing a "Subsequent Equity Financing"). These exchange rights were effective until the earlier of: (i) the completion of any number of subsequent financings aggregating at least $15 million gross proceeds to the Company, or (ii) December 30, 2017. The dollar amount used to determine the amount invested or exchanged into the subsequent financing would have been 1.2 times the amount of the original investment. Under certain circumstances, the ratio might have been 1.4 instead of 1.2. The exchange right did not permit the investors to exchange into a debt

offering or into redeemable preferred stock. In connection with this transaction, Aurora Capital LLC ("Aurora") served as a placement agent and earned $20,000 of cash fees and 8,000 placement agent common stock warrants associated with the closing of 1st 2017 Unit Offering. The cash fees were unpaid as of March 31, 2018.

On July 26, 2017, the Company's Board approved the 2nd 2017 Unit Offering. The terms of the 2nd 2017 Unit Offering as compared to the terms of the 1st 2017 Unit Offering were such, that it resulted in an exchange of units from the 1st 2017 Unit Offering for new equity securities and warrants of the Company in the 2nd 2017 Unit Offering by the Company by all of the investors in the 1st 2017 Unit Offering.

On August 29, 2017, September 27, 2017, September 28, 2017, October 5, 2017, October 25, 2017, November 29, 2017, December 13, 2017, December 21, 2017, December 22, 2017 and December 29, 2017 the Company sold units to investors in the 2nd 2017 Unit Offering for aggregate gross proceeds of $404,500, with each unit consisting of one share of the Company's common stock and one common stock purchase warrant to purchase one share of the Company's common stock (2nd 2017 Unit Offering). Units were sold for $1.00 per unit and the warrants issued in connection with the units are exercisable through September 29, 2022 at a fixed price $1.10 per share of the Company's common stock. The warrants contain a cashless exercise provision and certain blocker provisions preventing exercise if the investor would beneficially own more than 4.99% of the Company's outstanding shares of common stock as a result of such exercise. The warrants are also subject to redemption by the Company at $0.001 per share upon ten (10) days written notice if the Company's common stock closes at 250% or more of the unit purchase price for any five (5) consecutive trading days. Investors were not affiliates of the Company. Investors also received an unlimited number of piggy-back registration rights. Investors received an unlimited number of exchange rights, which were options and not obligations, to exchange such investor's entire investment (and not less than the entire investment) into one or more subsequent equity financings (consisting solely of convertible preferred stock or common stock or units containing preferred stock or common stock and warrants exercisable only into preferred stock or common stock) that would be considered as "permanent equity" under United States Generally Accepted Accounting Principles and the rules and regulations of the United States Securities and Exchange Commission, and therefore classified as stockholders' equity, and excluding any form of debt or convertible debt (each such financing a "Subsequent Equity Financing"). These exchange rights were effective until the earlier of: (i) the completion of any number of subsequent financings aggregating at least $15 million gross proceeds to the Company, or (ii) December 30, 2017, and have therefore expired. The dollar amount used to determine the amount invested or exchanged into the subsequent financing would have been 1.2 times the amount of the original investment. Under certain circumstances, the ratio might have been 1.4 instead of 1.2. The exchange right did not permit the investors to exchange into a debt offering or into redeemable preferred stock. There was no placement agent and therefore no fees associated with the 2nd 2017 Unit Offering.

The terms of the 2nd 2017 Unit Offering as compared to the terms of the 2nd 2016 Unit Offering and the 1st 2017 Unit Offering, has resulted in an exchange of all of the units from each of the 2nd 2016 Unit Offering and the 1st 2017 Unit Offering into equity securities and warrants of the 2nd 2017 Unit Offering.

The Company is continuing its efforts to raise additional capital in order to be able to pay its liabilities and fund its business activities on a going forward basis, including the pursuit of the Company's planned research and development activities. The Company regularly evaluates various measures to satisfy the Company's liquidity needs, including development and other agreements with collaborative partners and, when necessary, seeking to exchange or restructure the Company's outstanding securities. The Company is evaluating certain changes to its operations and structure to facilitate raising capital from sources that may be interested in financing only discrete aspects of the Company's development programs. Such changes could include a significant reorganization which may include the formation of one or more subsidiaries into which one or more programs may be contributed. As a result of the Company's current financial situation, the Company has limited access to external sources of debt and equity financing. Accordingly, there can be no assurances that the Company will be able to secure additional financing in the amounts necessary to fully fund its operating and debt service requirements. If the Company is unable to access sufficient cash resources, the Company may be forced to discontinue its operations entirely and liquidate.

The Company’s regular efforts to raise capital and to evaluate measures to permit sustainability are time-consuming and intensive. Such efforts may not prove successful and may cause distraction, disruption or other adversity that limits the Company’s development program efforts.

Recent Accounting Pronouncements

Management does not believe that any recently issued, but not yet effective, authoritative guidance, if currently adopted, would have a material impact on the Company's financial statement presentation or disclosures.

Concentration of Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents. The Company limits its exposure to credit risk by investing its cash with high credit quality financial institutions.

The Company's research and development efforts and potential products rely on licenses from research institutions and if the Company loses access to these technologies or applications, its business could be substantially impaired.

Under a patent license agreement with The Governors of the University of Alberta, the Company has exclusive rights to the use of certain ampakine compounds to prevent and treat respiratory depression induced by opioid analgesics, barbiturates and anesthetic and sedative agents.

On May 9, 2007, the Company entered into a license agreement, as subsequently amended, with the University of Alberta granting the Company exclusive rights to practice patents held by the University of Alberta claiming the use of ampakines for the treatment of various respiratory disorders. For more information about recent developments regarding the license agreement with the University of Alberta, see Part II, Item 1. Legal Proceedings and Note 9. Subsequent Events to our condensed consolidated financial statement as of and for the three months ended March 31, 2018. The Company agreed to pay the University of Alberta a licensing fee and a patent issuance fee, which were paid, and prospective payments consisting of a royalty on net sales, sublicense fee payments, maintenance payments and milestone payments. The prospective maintenance payments commence on the enrollment of the first patient into the first Phase 2B clinical trial and increase upon the successful completion of the Phase 2B clinical trial. As the Company does not at this time anticipate scheduling a Phase 2B clinical trial, no maintenance payments are currently due and payable to the University of Alberta.

Through the merger with Pier, the Company gained access to the Old License that Pier had entered into with the University of Illinois on October 10, 2007. The Old License covered certain patents and patent applications in the United States and other countries claiming the use of certain compounds referred to as cannabinoids for the treatment of sleep related breathing disorders (including sleep apnea), of which dronabinol is a specific example of one type of cannabinoid. Dronabinol is a synthetic derivative of the naturally occurring substance in the cannabis plant, otherwise known as Δ9-THC (Δ9-tetrahydrocannabinol). Dronabinol is currently approved by the FDA and is sold generically for use in refractory chemotherapy-induced nausea and vomiting, as well as for anorexia in patients with AIDS. Pier's business plan was to determine whether dronabinol would significantly improve subjective and objective clinical measures in patients with OSA. In addition, Pier intended to evaluate the feasibility and comparative efficacy of a proprietary formulation of dronabinol. The Old License was terminated effective March 21, 2013 due to the Company's failure to make a required payment and on June 27, 2014, the Company entered into the 2014 License Agreement with the University of Illinois, the material terms of which were similar to the Old License that had been terminated. If the Company is unable to comply with the terms of the 2014 License Agreement, such as an inability to make the payments required thereunder, the Company would be at risk of the 2014 License Agreement being terminated.

Critical Accounting Policies and Estimates

The Company prepared its condensed consolidated financial statements in accordance with accounting principles generally accepted in the United States of America. The preparation of these condensed consolidated financial statements requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amount of revenues and expenses during the reporting period. Management periodically evaluates the estimates and judgments made. Management bases its estimates and judgments on historical experience and on various factors that are believed to be reasonable under the circumstances. Actual results may differ from these estimates as a result of different assumptions or conditions.

The following critical accounting policies affect the more significant judgments and estimates used in the preparation of the Company's consolidated financial statements.

Stock-Based Compensation

The Company periodically issues common stock and stock options to officers, directors and consultants for services rendered. Such issuances vest and expire according to terms established at the issuance date of each grant.

The Company accounts for stock-based payments to officers and directors by measuring the cost of services received in exchange for equity awards based on the grant date fair value of the awards, with the cost recognized as compensation expense on the straight-line basis in the Company's financial statements over the vesting period of the awards. The Company accounts for stock-based payments to consultants by determining the value of the stock compensation based upon the measurement date at either (a) the date at which a performance commitment is reached, or (b) at the date at which the necessary performance to earn the equity instruments is complete.

Stock grants, which are generally subject to time-based vesting, are measured at the grant date fair value and charged to operations ratably over the vesting period.

Stock options granted to members of the Company's Scientific Advisory Board and to outside consultants are revalued each reporting period until vested to determine the amount to be recorded as an expense in the respective period. As the stock options vest, they are valued on each vesting date and an adjustment is recorded for the difference between the value already recorded and the value on the date of vesting.

The fair value of stock options is determined utilizing the Black-Scholes option-pricing model, and is affected by several variables, the most significant of which are the life of the equity award, the exercise price of the security as compared to the fair market value of the common stock on the grant date, and the estimated volatility of the common stock over the term of the equity award. Estimated volatility is based on the historical volatility of the Company's common stock. The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant. The fair value of common stock is determined by reference to the quoted market price of the Company's common stock.

Stock options and warrants issued to non-employees as compensation for services to be provided to the Company or in settlement of debt are accounted for based upon the fair value of the services provided or the estimated fair value of the stock option or warrant, whichever can be more clearly determined. Management uses the Black-Scholes option-pricing model to determine the fair value of the stock options and warrants issued by the Company. The Company recognizes this expense over the period in which the services are provided.

The Company recognizes the fair value of stock-based compensation in general and administrative costs and in research and development costs, as appropriate, in the Company's condensed consolidated statements of operations. The Company issues new shares of common stock to satisfy stock option exercises.

Note Exchange Agreements and Unit Exchange Agreements

See Note 3 to our condensed consolidated financial statements for the three months ended March 31, 2018 and 2017 for information on our "Note Exchange Agreements" and "Unit Exchange Agreements."

Research and Development Costs

Research and development costs consist primarily of fees paid to consultants and outside service providers and organizations (including research institutes at universities), patent fees and costs, and other expenses relating to the acquisition, design, development and testing of the Company's treatments and product candidates.

Research and development costs incurred by the Company under research grants are expensed as incurred over the life of the underlying contracts, unless the terms of the contract indicate that a different expensing schedule is more appropriate.

The Company reviews the status of its research and development contracts on a quarterly basis.

License Agreements

Obligations incurred with respect to mandatory payments provided for in license agreements are recognized ratably over the appropriate period, as specified in the underlying license agreement, and are recorded as liabilities in the Company's condensed consolidated balance sheet, with a corresponding charge to research and development costs in the Company's condensed consolidated statement of operations. Obligations incurred with respect to milestone payments provided for in license agreements are recognized when it is probable that such milestone will be reached and are recorded as liabilities in the Company's condensed consolidated balance sheet, with a corresponding charge to research and development costs in the Company's condensed consolidated statement of operations. Payments of such liabilities are made in the ordinary course of business.

Patent Costs

Due to the significant uncertainty associated with the successful development of one or more commercially viable products based on the Company's research efforts and any related patent applications, all patent costs, including patent-related legal and filing fees, are expensed as incurred.

Results of Operations

The Company's condensed consolidated statements of operations as discussed herein are presented below.

	Three Months Ended March 31, (unaudited)	
	2018	2017
Operating expenses:		
General and administrative, including $207,594 and $631,910 to related parties for the three months ended March 31, 2018 and 2017, respectively	354,843	1,036,301
Research and development, including $122,509 and $289,220 to related parties for the three months ended March 31, 2018 and 2017, respectively	151,334	384,384
Total operating costs and expenses	506,177	1,420,685
Loss from operations	(506,177)	(1,420,685)
Loss on extinguishment of debt in exchange for equity	(66,782)	-
Interest expense, including $5,610 and $3,827 to related parties for the three months ended March 31, 2018 and 2017, respectively	(27,273)	(25,037)
Foreign currency transaction (loss)	(146,446)	(23,422)
Net loss	(746,678)	(1,469,144)
Net loss attributable to common stockholders	$(746,678)	$(1,469,144)
Net loss per common share - basic and diluted	$(0.24)	$(0.68)
Weighted average common shares outstanding - basic and diluted	3,085,263	2,159,267

Three Months Ended March 31, 2018 and 2017

Revenues. The Company had no revenues during the three months ended March 31, 2018 and 2017.

General and Administrative. For the three months ended March 31, 2018, general and administrative expenses were $354,843, a decrease of $681,458, as compared to $1,036,301 for the three months ended March 31, 2017. The decrease in general and administrative expenses for the three months ended March 31, 2018, as compared to the three months ended March 31, 2017, is primarily due to a decrease in stock-based compensation of $494,904, decreases in legal fees of $179,678, and the net effect of increases and decreases other general and administrative expenses.

Stock-based compensation costs included in general and administrative expenses were $0 for the three months ended March 31, 2018, as compared to $494,904 for the three months ended March 31, 2017. No stock options were granted to members of management or the Company's Board of Directors during the three months ended March 31, 2018.

Research and Development. For the three months ended March 31, 2018, research and development expenses were $151,334, a decrease of $233,050, as compared to $384,384 for the three months ended March 31, 2017. The decrease in research and development expenses for the three months ended March 31, 2018, as compared to the three months ended March 31, 2017, is primarily a result of a decrease in stock-based compensation of $223,138.

Stock-based compensation costs included in research and development expenses were $0 for the three months ended March 31, 2018, as compared to $223,138 for the three months ended March 31, 2017. No stock options granted to members of management or consultants engaged in research and development activities during the three months ended March 31, 2018.

Loss on Extinguishment of Convertible Debt. In the three months ended March 31, 2018, the Company experienced a loss on the extinguishment of convertible debt of $66,782. On February 28, 2018, the Company entered into an exchange agreement with a single holder of two convertible notes. The note holder agreed to exchange an aggregate of $43,552 of principal and accrued interest for 58,071 shares of the Company's common stock. The closing price of the Company's common stock on February 28, 2018 was $1.90 per share. As a result of the exchange, $43,552 of convertible notes were cancelled and $110,334 market value of common stock was issued. There $0 loss on extinguishment of debt in the three months ended March 31, 2017.

Interest Expense. During the three months ended March 31, 2018, interest expense was $27,273 (including $5,610 to related parties), an increase of $2,236, as compared to $25,037 (including $3,827 to related parties) for the three months ended March 31, 2017. The increase is the result of the exchange of two convertible notes on February 28, 2018.

Foreign Currency Transaction (Loss) Gain. Foreign currency transaction loss was $146,446 for the three months ended March 31, 2018, as compared to a foreign currency transaction loss of $23,422 for the three months ended March 31, 2017. The foreign currency transaction (loss) gain relates to the $399,774 loan from SY Corporation Co., Ltd., formerly known as Samyang Optics Co. Ltd., made in June 2012, which is denominated in the South Korean Won.

Net Loss. For the three months ended March 31, 2018, the Company incurred a net loss of $746,678 as compared to a net loss of $1,469,144 for the three months ended March 31, 2017.

Net Loss Attributable to Common Stockholders. For the three months ended March 31, 2018, the Company incurred a net loss attributable to common stockholders of $746,678, as compared to a net loss attributable to common stockholders of $1,469,144 for the three months ended March 31, 2017.

Liquidity and Capital Resources - March 31, 2018

The Company's condensed consolidated financial statements have been presented on the basis that it is a going concern, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. The Company has incurred net losses of $746,678 for the three months ended March 31, 2018 and $4,291,483 for the fiscal year ended December 31, 2017, and negative operating cash flows of $140,022 for the three months ended March 31, 2018 and $697,009 for the fiscal year ended December 31, 2017, had a stockholders' deficiency of $4,977,253 at March 31, 2018, and expects to continue to incur net losses and negative operating cash flows for at least the next few years. As a result, management has concluded that there is substantial doubt about the Company's ability to continue as a going concern, and the Company's independent registered public accounting firm, in its report on the Company's consolidated financial statements for the year ended December 31, 2017, expressed substantial doubt about the Company's ability to continue as a going concern.

At March 31, 2018, the Company had a working capital deficit of $4,991,576, as compared to a working capital deficit of $4,373,442 at December 31, 2017, reflecting an increase in the working capital deficit of $618,134 for the three months ended March 31, 2018. The increase in the working capital deficit during the three months ended March 31, 2018 is comprised primarily of an increase in total current liabilities of $591,255. The increase in total current liabilities of $591,255 consists of a net increase in accounts payable and accrued expenses of $126,943, an increase in accrued compensation of $278,950, an increase in other notes payable (primarily the financing of an insurance premium) of $55,386, and increase in the note to Samyang inclusive of accrued interest of $158,275, an increase in notes payable to officers inclusive of accrued interest of $5,610, offset by a decrease in convertible notes payable inclusive of accrued interest of $33,909 as a result of two convertible note exchanges on February 28, 2018.

At March 31, 2018, the Company had cash aggregating $266, as compared to $84,902 at December 31, 2017, reflecting decrease in cash of $84,636 for the three months ended March 31, 2018. The decrease in cash during the three months ended March 31, 2018 was primarily the result of cash used in operations and the lack of any meaningful financing being obtained.

The Company is currently, and has for some time, been in significant financial distress. It has extremely limited cash resources and current assets and has no ongoing source of revenue. Management is continuing to address numerous aspects of the Company's operations and obligations, including, without limitation, debt obligations, financing requirements, intellectual property, licensing agreements, legal and patent matters and regulatory compliance, and has taken steps to continue to raise new debt and equity capital to fund the Company's business activities.

To meet minimum operating needs, from June 2013 through March 31, 2018, the Company has engaged in a number of financings of various types. These included the issuance of notes to the Chairman at that time prior to the March and April 2014 closing of the Series G 1.5% Convertible Note financing, in which the Chairman at that time participated and in respect to which financing the earlier notes from the Chairman at that time were repaid. Subsequently, the Company completed the Convertible Note and Warrant financing followed by the 1st 2016 Unit Financing, the 2nd 2016 Unit Financing, the Note and Warrant Exchange Agreements and the related financing associated with warrant exercises, the Warrant Exchange Agreements associated with the 1st 2016 Unit Financing that resulted in the exercise of a portion of the associated warrants and the 1st and 2nd 2017 Unit Financings. The Company has also issued notes and related warrants to two executive officers in exchange for financing. The Company is continuing its efforts to raise additional capital in order to be able to pay its liabilities and fund its business activities on a going forward basis and regularly evaluates various measures to satisfy the Company's liquidity needs, including development and other agreements with collaborative partners and seeking to exchange or restructure some of the Company's outstanding securities. The Company is evaluating certain changes to its operations and structure to facilitate raising capital from sources that may be interested in financing only discrete aspects of the Company's development programs. Such changes could include a significant reorganization. Though the Company actively pursues opportunities to finance its operations through external sources of debt and equity financing, it has limited access to such financing and there can be no assurance that such financing will be available on terms acceptable to the Company, or at all.

Operating Activities. For the three months ended March 31, 2018, operating activities utilized cash of $140,022, as compared to utilizing cash of $221,091 for the three months ended March 31, 2017, to support the Company's ongoing general and administrative expenses as well as its research and development activities.

Financing Activities. For the three months ended March 31, 2018, financing activities consisted of the borrowings on short term notes of $55,386. For the three months ended March 31, 2017, financing activities generated cash of $350,000 from the 1st 2017 Unit Offering.

Principal Commitments

Employment Agreements

On August 18, 2015, the Company entered into an employment agreement with Dr. James S. Manuso to be its new President and Chief Executive Officer. In connection therewith, and in addition to other provisions, the Board of Directors of the Company awarded Dr. Manuso stock options to purchase a total of 261,789 shares of common stock, of which options for 246,154 shares were granted pursuant to the Company's 2015 Plan and options for 15,635 shares were granted pursuant to the Company's 2014 Plan. The stock options vested 50% on August 18, 2015 (at issuance), 25% on February 18, 2016, and 25% on August 18, 2016, and will expire on August 18, 2025. The exercise price of the stock options was established on the grant date at $6.4025 per share, which is equal to the simple average of the most recent four full trading weeks, weekly Volume Weighted Average Prices ("VWAPs") of the Company's common stock price immediately preceding the date of grant as reported by the OTC markets, as compared to the closing market price of the Company's common stock on August 18, 2015 of $7.02 per share. The aggregate grant date fair value of these stock options calculated pursuant to the Black-Scholes option-pricing model was $1,786,707. Additional information with respect to other provisions of the employment agreement is provided in the Company's condensed consolidated financial statements at Note 8.

On August 18, 2015, the Company also entered into employment agreements with Dr. Arnold S. Lippa, its new Chief Scientific Officer, Robert N. Weingarten, its Vice President and Chief Financial Officer, and Jeff E. Margolis, its Vice President, Treasurer and Secretary. In connection therewith, and in addition to other provisions, the Board of Directors of the Company awarded to each of those officers, stock options to purchase a total of 30,769 shares of common stock pursuant to the Company's 2015 Plan. The stock options vested 25% on December 31, 2015, 25% on March 31, 2016, 25% on June 30, 2016, and 25% on September 30, 2016, and will expire on August 18, 2022. The exercise price of the stock options was established on the grant date at $6.4025 per share, which is equal to the simple average of the most recent four full trading weeks, weekly VWAPs of the Company's common stock price immediately preceding the date of grant as reported by the OTC Markets, as compared to the closing market price of the Company's common stock on August 18, 2015 of $7.0200 per share. The aggregate grant date fair value of these stock options calculated pursuant to the Black-Scholes option-pricing model was $609,000. During the three months ended March 31, 2018 and 2017, the Company recorded charges to operations of $0 and $0, respectively, with respect to these stock options and the stock options issued to Dr. Manuso described in the prior paragraph. Additional information with respect to other provisions of the employment agreement is provided in the Company's condensed consolidated financial statements at Note 8.

In February 2017, Robert N. Weingarten resigned as the Company's Vice President and Chief Financial Officer and resigned as a member of the Company's Board of Directors. The Board of Directors accepted Mr. Weingarten's resignation and appointed Mr. Margolis to the additional title of Chief Financial Officer. Other than the additional title and responsibilities, there were no changes to Mr. Margolis' compensation arrangements at that time. Mr. Weingarten remains a consultant to the Company.

Jeff E. Margolis' employment agreement was amended effective July 1, 2017 and he was named Chief Financial Officer (no longer interim). The employment agreement amendment called for payment in three installments in cash of the $60,000 bonus granted on June 30, 2015. A minimum of $15,000 was to be payable in cash as follows: (a) $15,000 payable in cash upon the next closing (after July 1, 2017) of any financing in excess of $100,000 (b) $15,000 payable by the end of the following month assuming cumulative closings (beginning with the closing that triggered (a)) in excess of $200,000 and (c) $30,000 payable in cash upon the next closing of any financing in excess of an additional $250,000. The conditions of (a), (b) and (c) above were met as of December 31, 2017, however Mr. Margolis has waived the Company's obligation to make any payments of the cash bonus until the Board of Directors of the Company determines that sufficient capital has been raised by the Company or is otherwise available to fund the Company's operations on an ongoing basis. Obligations through September 30, 2017 were forgiven by Mr. Margolis as described below. Additional information with respect to other provisions of the employment agreement is provided in the Company's condensed consolidated financial statements at Note 8.

On January 17, 2017, the Board of Directors further increased the number of shares that may be issued under the 2015 Plan to 3,038,461 shares of the Company's common stock. On December 9, 2017, the Board of Directors further increased the number of shares that may be issued under the 2015 Plan to 6,985,260 shares of the Company's common stock.

On January 17, 2017, the Board of Directors of the Company awarded stock options for a total of 395,000 shares of Common Stock in various quantities to seventeen individuals or their designees pursuant to the Company's 2015 Plan. The individuals are members of management, the Company's Scientific Advisory Board, independent members of the Board of Directors or outside service providers. The stock options vested 25% on the date of the grant, 50% on March 31, 2017 and 25% on June 30, 2017, and are exercisable for five years at $3.90 per share of Common Stock.

On July 26, 2017, the Company granted Jeff E. Margolis, 25,000 non-qualified stock options from the 2015 Plan, all of which vested by December 31, 2017. The options have an exercise price of $2.00 per share and expire on July 26, 2022.

On July 28, 2017, the Board of Directors awarded 34,000 non-qualified stock options from the 2015 Plan to two consultants totaling. The options have an exercise price of $1.35 per share of common stock and expire on July 28, 2022. All of these options were vested by December 31, 2017.

On December 9, 2017, the Company accepted offers from Dr. Arnold S. Lippa, Dr. James S. Manuso, Jeff E. Margolis, James E. Sapirstein, Kathryn MacFarlane and Robert N. Weingarten (former Chief Financial Officer) pursuant to which such individuals would forgive accrued compensation and related accrued expenses as of September 30, 2017 in the following amounts: $807,497; $878,360; $560,876; $55,000; $55,000 and $200,350, respectively, for a total of $2,557,083. On the same date, the Board of Directors of the Company granted to the same individuals, or designees of such individuals from the 2015 Plan, non-qualified stock options, exercisable for 10 years

with an exercise price of $1.45 per share of common stock, among other terms and features as follows: 559,595; 608,704; 388,687; 38,114; 38,114 and 138,842, respectively, for options exercisable into a total of 1,772,055 shares of common stock.

On December 9, 2017, the Board of Directors of the Company awarded 100,000 non-qualified stock options from the 2015 Plan to Richard Purcell, the Company’s Senior Vice President of Research and Development as a bonus. These options vested upon grant, have an exercise price of $1.45 and are exercisable for 10 years.

Information with respect to the issuance of common stock options in connection with the settlement of debt obligations and as payment for consulting services is provided in the Company's Condensed Consolidated Financial Statements at Note 5.

Information with respect to common stock awards issued to officers and directors as compensation is provided above under "Common Stock."

Information with respect to the Black-Scholes variables used in connection with the evaluation of the fair value of stock-based compensation is provided in the Company's Consolidated Financial Statements at Note 3.

University of Alberta License Agreement

On May 9, 2007, the Company entered into a license agreement, as amended, with the University of Alberta granting the Company exclusive rights to practice patents held by the University of Alberta claiming the use of ampakines for the treatment of various respiratory disorders. The Company agreed to pay the University of Alberta a licensing fee and a patent issuance fee, which were paid, and prospective payments consisting of a royalty on net sales, sublicense fee payments, maintenance payments and milestone payments. The prospective maintenance payments commence on the enrollment of the first patient into the first Phase 2B clinical trial and increase upon the successful completion of the Phase 2B clinical trial. As the Company does not at this time anticipate scheduling a Phase 2B clinical trial, no maintenance payments are currently due and payable to the University of Alberta. For more information about recent developments regarding the license agreement with the University of Alberta, see Part II, Item 1. Legal Proceedings and Note 9. Subsequent Events to our condensed consolidated financial statement as of and for the three months ended March 31, 2018.

University of Illinois 2014 Exclusive License Agreement

On June 27, 2014, the Company entered into an Exclusive License Agreement (the "2014 License Agreement") with the University of Illinois, the material terms of which were similar to the License Agreement between the parties that had been previously terminated on March 21, 2013. The 2014 License Agreement became effective on September 18, 2014, upon the completion of certain conditions set forth in the 2014 License Agreement, including: (i) the payment by the Company of a $25,000 licensing fee, (ii) the payment by the Company of outstanding patent costs aggregating $15,840, and (iii) the assignment to the University of Illinois of rights the Company held in certain patent applications, all of which conditions were fulfilled.

The 2014 License Agreement granted the Company (i) exclusive rights to several issued and pending patents in numerous jurisdictions and (ii) the non-exclusive right to certain technical information that is generated by the University of Illinois in connection with certain clinical trials as specified in the 2014 License Agreement, all of which relate to the use of cannabinoids for the treatment of sleep related breathing disorders. The Company is developing dronabinol (Δ9-tetrahydrocannabinol), a cannabinoid, for the treatment of OSA, the most common form of sleep apnea.

The 2014 License Agreement provides for various commercialization and reporting requirements commencing on June 30, 2015. In addition, the 2014 License Agreement provides for various royalty payments, including a royalty on net sales of 4%, payment on sub-licensee revenues of 12.5%, and a minimum annual royalty beginning in 2015 of $100,000, which is due and payable on December 31 of each year beginning on December 31, 2015. The minimum annual royalty of $100,000 was paid as scheduled in December 2017 and 2016, respectively. In the year after the first application for market approval is submitted to the FDA and until approval is obtained, the minimum annual royalty will increase to $150,000. In the year after the first market approval is obtained from the FDA and until the first sale of a product, the minimum annual royalty will increase to $200,000. In the year after the first commercial sale of a product, the minimum annual royalty will increase to $250,000. The Company recorded a charge to operations of $100,000 with respect to its 2017 minimum annual royalty obligation, which is included in research and development expenses in the Company’s consolidated statement of operations for the year ended December 31, 2017.

The 2014 License Agreement also provides for certain one-time milestone payments. A payment of $75,000 is due within five days after any one of the following: (a) dosing of the first patient with a product in a Phase 2 human clinical study anywhere in the world that is not sponsored by the University of Illinois, (b) dosing of the first patient in a Phase 2 human clinical study anywhere in the world with a low dose of dronabinol, or (c) dosing of the first patient in a Phase 1 human clinical study anywhere in the world with a proprietary reformulation of dronabinol. A payment of $350,000 is due within five days after dosing of the first patient with a product in a Phase 3 human clinical trial anywhere in the world. A payment of $500,000 is due within five days after the first new drug application filing with the FDA or a foreign equivalent for a product. A payment of $1,000,000 is due within 12 months after the first commercial sale of a product.

Research Contract with the University of Alberta

On January 12, 2016, the Company entered into a Research Contract with the University of Alberta in order to test the efficacy of ampakines at a variety of dosage and formulation levels in the potential treatment of Pompe Disease, apnea of prematurity and spinal cord injury, as well as to conduct certain electrophysiological studies to explore the ampakine mechanism of action for central respiratory depression. The Company agreed to pay the University of Alberta total consideration of approximately CAD$146,000 (approximately US$108,000), consisting of approximately CAD$85,000 (approximately US$63,000) of personnel funding in cash in four installments during 2016, to provide approximately CAD$21,000 (approximately US$16,000) in equipment, to pay patent costs of CAD$20,000 (approximately US$15,000), and to underwrite additional budgeted costs of CAD$20,000 (approximately US$15,000). As of December 31, 2017, the Company had recorded final amounts payable in respect to this Research Contract of US$16,207 (CAD$21,222) which amount was paid in US dollars in January 2018 and completed the payments under the contract. The conversion to US dollars above utilizes an exchange rate of approximately US$0.76 for every CAD$1.00.

The University of Alberta received matching funds through a grant from the Canadian Institutes of Health Research in support of this research. The Company will retain the rights to research results and any patentable intellectual property generated by the research. Dr. John Greer, Ph.D., faculty member of the Department of Physiology, Perinatal Research Centre, and Women & Children’s Health Research Institute at the University of Alberta, collaborated on this research. The studies were completed in 2016.

National Institute of Drug Abuse Agreement

As a result of agreements entered into on October 19, 2015 and January 19, 2016, the Medications Development Program of the National Institute of Drug Abuse (“NIDA”) funded and conducted research on the Company’s ampakine compounds CX717 and CX1739 to determine their potential usefulness for the treatment of cocaine and methamphetamine addiction and abuse. The Company retains all intellectual property resulting from this research, as well as proprietary and commercialization rights to these compounds.

In general, the ampakines did not produce in rats and mice behavioral effects that are commonly associated with administration of stimulants such as cocaine or amphetamines. Instead, the ampakines reduced the stimulation produced by both of these drugs. The absence of stimulation on the part of the ampakines may confirm their value as potential non-stimulant treatments for ADHD. In addition, the ampakines did not affect the behavior of rats that had been trained to recognize whether they had been administered cocaine or methamphetamine.

Duke University Clinical Trial Agreement

On January 27, 2015, the Company entered into a Clinical Study and Research Agreement (the "Agreement") with Duke University to develop and conduct a protocol for a program of clinical study and research which was amended on October 30, 2015 and further amended on July 28, 2016, which agreement, as amended, resulted in a total amount payable under the Agreement to $678,327. During the three months ended March 31, 2018 and 2017, the Company charged $0 to research and development expenses with respect to work conducted pursuant to the amended Agreement. The Company announced the study results on December 15, 2016.

Sharp Clinical Services, Inc. Agreement

The Company has various agreements with Sharp Clinical Services, Inc. to provide packaging, labeling, distribution and analytical services.

Covance Laboratories Inc. Agreement

On October 26, 2016, the Company entered into a twelve month agreement with Covance Laboratories Inc. to provide compound testing and storage services with respect to CX1739, CX1866 and CX1929 at a total budgeted cost of $35,958. This agreement was renewed in October 2017.

Summary of Principal Cash Obligations and Commitments

The following table sets forth the Company's principal cash obligations and commitments for the next five fiscal years as of March 31, 2018, aggregating $1,034,400. Amounts included in the 2018 column represent amounts contractually due at March 31, 2018 during the remainder of the 2018 fiscal year ending December 31, 2018.

		Payments Due By Year				
	Total	2018	2019	2020	2021	2022
Research and development contracts	$-	$-	$-	$-	$-	$-
Clinical trial agreements	-	-	-	-	-	-
License agreements	475,000	75,000	100,000	100,000	100,000	100,000
Digital media consulting agreement	12,500	12,500				
Employment and consulting agreements (1)	546,900	546,900	-	-	-	-
Total	$1,034,400	$634,400	$100,000	$100,000	$100,000	$100,000

(1) The payment of such amounts has been deferred indefinitely, as described above at "Employment Agreements".

Off-Balance Sheet Arrangements

At March 31, 2018, the Company did not have any transactions, obligations or relationships that could be considered off-balance sheet arrangements.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

Not applicable.

ITEM 4. CONTROLS AND PROCEDURES

(a) Evaluation of Disclosure Controls and Procedures

The Company maintains disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act") that are designed to ensure that information required to be disclosed in the reports that the Company files with the Securities and Exchange Commission (the "SEC") under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to the Company's management, including its Chief Executive Officer and Chief Financial Officer, to allow for timely decisions regarding required disclosures.

The Company carried out an evaluation, under the supervision and with the participation of its management, consisting of its principal executive officer and principal financial officer, of the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act). Based upon that evaluation, the Company's principal executive officer and principal financial officer concluded that, as of the end of the period covered in this report, the Company's disclosure controls and procedures were not effective to ensure that information required to be disclosed in reports filed under the Exchange Act is recorded, processed, summarized and reported within the required time periods and is accumulated and communicated to the Company's management, consisting of the Company's principal executive officer and principal financial officer, to allow timely decisions regarding required disclosure. The Company failed to complete and file various periodic reports in 2012, 2013 and 2014 in a timely manner because the Company's accounting and financial staff had resigned by October 26, 2012 and its financial and accounting systems had been shut-down at December 31, 2012.

Current management, which joined the Company in March 2013, has been focusing on developing replacement controls and procedures that are adequate to ensure that information required to be disclosed in reports filed under the Exchange Act is recorded, processed, summarized and reported within the required time periods and is accumulated and communicated to the Company's management, consisting of the Company's principal executive officer and principal financial officer, to allow timely decisions regarding required disclosure. Current management has instituted a program to reestablish the Company's accounting and financial staff and install new accounting and internal control systems, and has retained accounting personnel, established accounting and internal control systems, addressed the preparation of delinquent financial statements, and worked diligently to bring delinquent SEC filings current as promptly as reasonably possible under the circumstances. The Company is now current in its SEC periodic reporting obligations, but as of the date of the filing of this Quarterly Report on Form 10-Q, the Company had not yet completed the process to establish adequate internal controls over financial reporting. In February 2017, the Company's Chief Financial Officer resigned and the Board of Directors appointed one of the Company's existing officers as Chief Financial Officer. The Company remains under staffed in such respects.

The Company's management, consisting of its principal executive officer and principal financial officer, does not expect that its disclosure controls and procedures or its internal controls will prevent all error or fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Furthermore, the design of a control system must reflect the fact that there are resource constraints and the benefits of controls must be considered relative to their costs. Due to the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. Management believes that the financial statements included in this report fairly present, in all material respects, the Company's financial condition, results of operations and cash flows for the periods presented.

(b) Changes in Internal Controls over Financial Reporting

The Company's management, consisting of its principal executive officer and principal financial officer, has determined that no change in the Company's internal control over financial reporting (as that term is defined in Rules 13(a)-15(f) and 15(d)-15(f) of the Securities Exchange Act of 1934) occurred during or subsequent to the end of the period covered in this report that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II - OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

By letter dated May 18, 2018, the Company received notice from counsel claiming to represent TEC Edmonton and The Governors of the University of Alberta, which purports to terminate, effective December 12, 2017, the license agreement dated May 9, 2007 between the Company and The Governors of the University of Alberta. The Company, through its counsel, disputed any grounds for termination and has notified the representative of its intention to invoke Section 13 of that license agreement, which mandates a meeting to be attended by individuals with decision-making authority to attempt in good faith to negotiate a resolution to the dispute. No assurance can be provided that the parties will reach an acceptable resolution and, in light of the early stages of the disagreement, we cannot estimate the possible impact of this disagreement on the Company's operations or business prospects.

By letter dated February 5, 2016, the Company received a demand from a law firm representing a professional services vendor of the Company alleging an amount due and owing for unpaid services rendered. On January 18, 2017, following an arbitration proceeding, an arbitrator awarded the vendor the full amount sought in arbitration of $146,082. Additionally, the arbitrator granted the vendor attorneys' fees and costs of $47,937. All such amounts have been accrued at December 31, 2017.

The Company is periodically subject to various pending and threatened legal actions and claims. See Note 8 to our condensed consolidated financial statements for the three months ended March 31, 2018 and for the fiscal year ended December 31, 2017—Commitments and Contingencies—*Pending or Threatened Legal Actions and Claims* for details regarding these matters.

In the opinion of management of the Company, adequate provision has been made in the Company's condensed consolidated financial statements at March 31, 2018 and our consolidated financial statements at December 31, 2017 with respect to such matters, including, specifically, the matters noted above. The Company intends to vigorously defend itself if any of the matters described above results in the filing of a lawsuit or formal claim.

ITEM 1A. RISK FACTORS

As of the date of this filing, there have been no material changes to the Risk Factors included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2017, as filed with the SEC on April 17, 2018 (the "2017 Form 10-K"). The Risk Factors set forth in the 2017 Form 10-K should be read carefully in connection with evaluating the Company's business and in connection with the forward-looking statements contained in this Quarterly Report on Form 10-Q. Any of the risks described in the 2017 Form 10-K could materially adversely affect the Company's business, financial condition or future results and the actual outcome of matters as to which forward-looking statements are made. These are not the only risks that the Company faces. Additional risks and uncertainties not currently known to the Company or that the Company currently deems to be immaterial also may materially adversely affect the Company's business, financial condition and/or operating results.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

On January 17, 2017, the Board of Directors of the Company awarded stock options for a total of 395,000 shares of common stock in various quantities to seventeen individuals and entities who are members of management, the Company's Scientific Advisory Board, independent members of the Board of Directors, or outside service providers pursuant to the Company's 2015 Plan. The stock options vested 25% upon grant, 25% on March 31, 2017, and an additional 50% on June 30, 2017, and will expire on January 17, 2022. The exercise price of the stock options was established on the grant date at $3.90 per share, which was the closing market price of the Company's common stock on such date. The aggregate grant date fair value of these stock options, as calculated pursuant to the Black-Scholes option-pricing model, was $1,464,305. During the three months ended March 31, 2017, the Company recorded a charge to operations of $721,042 with respect to these stock options.

On March 10, 2017 and March 28, 2017, the Company sold units to investors for aggregate gross proceeds of $350,000, with each unit consisting of one share of the Company's common stock and one common stock purchase warrant to purchase one share of the Company's common stock ("2017 Unit Offering"). Units were sold for $2.50 per unit and the warrants issued in connection with the units are exercisable at a fixed price $2.75 per share of the Company's common stock. The warrants contained a cashless exercise provision and certain blocker provisions preventing exercise during periods of time when the investor would beneficially own more than 4.99% of the Company's outstanding shares of common stock if such exercise were to occur. The warrants were also subject to redemption by the Company at $0.001 per share upon ten (10) days written notice if the Company's common stock closes at 200% or more of the unit purchase price for any five (5) consecutive trading days. Investors received an unlimited number of piggy-back registration rights. Investors received an unlimited number of exchange rights, which were options and not obligations, to exchange such investor's entire investment (and not less than the entire investment) into one or more subsequent equity financings (consisting solely of convertible preferred stock or common stock or units containing preferred stock or common stock and warrants exercisable only into preferred stock or common stock) that would be considered as "permanent equity" under United States Generally Accepted Accounting Principles and the rules and regulations of the United States Securities and Exchange Commission, and therefore classified as stockholders' equity, and excluding any form of debt or convertible debt (each such financing a

"Subsequent Equity Financing"). These exchange rights were effective until the earlier of: (i) the completion of any number of subsequent financings aggregating at least $15 million gross proceeds to the Company, or (ii) December 30, 2017. The dollar amount used to determine the amount invested or exchanged into the subsequent financing would have been 1.2 times the amount of the original investment. Under certain circumstances, the ratio might have been 1.4 instead of 1.2. The exchange right did not permit the investors to exchange into a debt offering. The exchange right did not permit the investors to exchange into a debt offering or into redeemable preferred stock, therefore, unlike the 2nd 2016 Unit Offering, the 1st 2017 Unit Offering resulted in the issuance of permanent equity. The closing market prices of the Company's common stock on March 10, 2017 and March 28, 2017 were $4.05 and $3.80 respectively.

Investors were non-affiliated purchasers. The offer and sale of the shares of common stock and the warrants in the private placement were made in reliance on the exemption from registration afforded by Section 4(a)(2) of the Securities Act as provided in Rule 506(b) of Regulation D promulgated thereunder.

On August 29, 2017, September 27, 2017, September 28, 2017, October 5, 2017, October 25, 2017, November 29, 2017, December 13, 2017, December 21, 2017, December 22, 2017 and December 29, 2017 the Company sold units to investors in the 2nd 2017 Unit Offering for aggregate gross proceeds of $404,500, with each unit consisting of one share of the Company's common stock and one common stock purchase warrant to purchase one share of the Company's common stock. Units were sold for $1.00 per unit and the warrants issued in connection with the units are exercisable through September 29, 2022 at a fixed price $1.10 per share of the Company's common stock. The warrants contain a cashless exercise provision and certain blocker provisions preventing exercise if the investor would beneficially own more than 4.99% of the Company's outstanding shares of common stock as a result of such exercise. The warrants are also subject to redemption by the Company at $0.001 per share upon ten (10) days written notice if the Company's common stock closes at 250% or more of the unit purchase price for any five (5) consecutive trading days. The investors in the offering were not affiliates of the Company. Investors also received an unlimited number of piggy-back registration rights. Investors also received an unlimited number of exchange rights, which were options and not obligations, to exchange such investor's entire investment (and not less than the entire investment) into one or more subsequent equity financings (consisting solely of convertible preferred stock or common stock or units containing preferred stock or common stock and warrants exercisable only into preferred stock or common stock) that would be considered as "permanent equity" under United States Generally Accepted Accounting Principles and the rules and regulations of the United States Securities and Exchange Commission, and therefore classified as stockholders' equity, and excluding any form of debt or convertible debt (each such financing a "Subsequent Equity Financing" as in the 1st 2017 Unit Offering). These exchange rights were effective until the earlier of: (i) the completion of any number of subsequent financings aggregating at least $15 million gross proceeds to the Company, or (ii) December 30, 2017 and therefore have expired. The dollar amount used to determine the amount invested or exchanged into the subsequent financing would have been 1.2 times the amount of the original investment. Under certain circumstances, the ratio might have been 1.4 instead of 1.2. The exchange right did not permit the investors to exchange into a debt offering or into redeemable preferred stock, therefore, unlike the 2nd 2016 Unit Offering, the 2nd 2017 Unit Offering resulted in the issuance of permanent equity.

The Company evaluated whether the warrants or the exchange rights met criteria to be accounted for as a derivative in accordance with Accounting Standard Codification Topic (ASC) 815 and determined that the derivative criteria were not met. Therefore, the Company determined no bifurcation and separate valuation was necessary and the warrants and exchange right should be accounted for with the host instrument. The closing market prices of the Company's common stock on August 29, 2017, September 27, 2017, September 28, 2017, October 5, 2017, October 25, 2017, November 29, 2017, December 13, 2017, December 21, 2017, December 22, 2017 and December 29, 2017 were

$1.00, $1.40, $1.40, $1.50, $0.80, $1.05, $1.45, $1.51, $1.45 and $1.14 respectively. There was no placement agent and therefore no fees associated with the 2nd 2017 Unit Offering.

The terms of the 2nd 2017 Unit Offering, as compared to the terms of the 2nd 2016 Unit Offering and the 1st 2017 Unit Offering, were such that all of the units from each of the 2nd 2016 Unit Offering and the 1st 2017 Unit Offering were exchanged into securities of the 2nd 2017 Unit Offering. Because the 1st 2017 Unit Offering and the 2nd 2017 Unit Offering were both originally accounted for as equity, a reclassification similar to the 2nd 2016 Unit Offering was not required.

The shares of common stock and warrants in each of the private placements discussed above were offered and sold without registration under the Securities Act of 1933, as amended (the “Securities Act”) in reliance on the exemptions provided by Section 4(a)(2) of the Securities Act as provided in Rule 506(b) of Regulation D promulgated thereunder. None of the shares of common stock issued as part of the units, the warrants, the common stock issuable upon exercise of the warrants or any warrants issued to a qualified referral source have been registered under the Securities Act or any other applicable securities laws, and unless so registered, may not be offered or sold in the United States except pursuant to an exemption from the registration requirements of the Securities Act.

Additional information with respect to the transactions described above is provided in the Notes to the Condensed Consolidated Financial Statements for the three months ended March 31, 2018 and 2017.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Note Payable to SY Corporation Co., Ltd.

On June 25, 2012, the Company borrowed 465,000,000 Won (the currency of South Korea, equivalent to approximately $400,000 United States Dollars) from and executed a secured note payable to SY Corporation Co., Ltd., formerly known as Samyang Optics Co. Ltd. ("Samyang"), an approximately 20% common stockholder of the Company at that time. Samyang was a significant stockholder and a related party at the time of the transaction, but was not considered a significant stockholder or related party at March 31, 2017. The note accrues simple interest at the rate of 12% per annum and had a maturity date of June 25, 2013. The Company has not made any payments on the promissory note. At June 30, 2013 and subsequently, the promissory note was outstanding and in technical default, although Samyang has not issued a notice of default or a demand for repayment. The Company believes that Samyang is in default of its obligations under its January 2012 license agreement, as amended, with the Company, but the Company has not yet issued a notice of default. The Company has in the past made several efforts towards a comprehensive resolution of the aforementioned matters involving SY Corporation. During the three months ended March 31, 2018, there were no further communications between the Company and SY Corporation.

Note payable to Samyang consists of the following at March 31, 2018 and December 31, 2017:

	March 31, 2018	December 31, 2017
Principal amount of note payable	$399,774	$399,774
Accrued interest payable	279,164	267,335
Foreign currency transaction adjustment	63,164	(83,282)
	$742,102	$583,827

Interest expense with respect to this promissory note was $11,829 and $11,829 for the three months ended March 31, 2018 and 2017, respectively.

Default on Convertible Notes Payable

During October 2016, four holders of five Notes issued formal notices of default, and as a result, those five Notes were deemed to be in default under the terms of the Notes and began to accrue interest at the default rate of 12% per annum from the default date in accordance with the terms of the Notes. On February 28, 2018, one holder of two such Notes exchanged the holder's Notes, inclusive of accrued interest, totaling $43,552 for 58,071 shares of common stock.

At March 31, 2018, the amount owed on the Notes in default was $49,807, including principal and interest.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

Not applicable.

ITEM 6. EXHIBITS

INDEX TO EXHIBITS

The following documents are filed as part of this report:

Exhibit Number	Description of Document
10.1	Form of Demand Promissory Note incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed April 11, 2018.
31.1*	Officer's Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Officer's Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Officer's Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Officer's Certification 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 Extension Calculation Linkbase Document

101.LAB**	XBRL Taxonomy Extension Label Linkbase Document
101.PRE**	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF**	XBRL Taxonomy Extension Definition Linkbase Document

* Filed herewith.

** In accordance with Regulation S-T, the XBRL related information on Exhibit No. 101 to this Quarterly Report on Form 10-Q shall be deemed “furnished” herewith not “filed.”

SIGNATURES

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

RESPIRERX PHARMACEUTICALS INC.
(Registrant)

Date: May 21, 2018 By: */s/ James S. Manuso*
James S. Manuso
President and Chief Executive Officer

Date: May 21, 2018 By: */s/ Jeff Eliot Margolis*
Jeff Eliot Margolis
Senior Vice President, Chief Financial Officer, Treasurer and Secretary