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

FORM 10-Q

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

For the quarterly period ended June 30, 2021

☐ 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)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
N/A	N/A	N/A

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes ☒ 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 ☒

Smaller reporting company ☒

Emerging growth company ☐

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ☐ No ☒

As of August 5, 2021, the Company had 90,396,596, shares of common stock, $0.001 par value, issued and outstanding.

RESPIRERX PHARMACEUTICALS INC.
AND SUBSIDIARY

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In this Quarterly Report on Form 10-Q, the terms "RespireRx," the "Company," "we," "us" and "our" refer to RespireRx Pharmaceuticals Inc. a Delaware corporation, and, unless the context indicates otherwise, its consolidated subsidiaries.

INTRODUCTORY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q of RespireRx Pharmaceuticals Inc. ("RespireRx" and together with RespireRx's wholly owned subsidiary, Pier Pharmaceuticals, Inc. ("Pier"), the "Company, "we," or "our," unless the context indicates otherwise) contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), 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 "assumes," "could," "ongoing," "potential," "predicts," "projects," "should," "will," "would," "anticipates," "believes," "intends," "estimates," "expects," "plans," "contemplates," "targets," "continues," "budgets," "may," or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words, and such statements 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 products candidates, (iv) reorganization plans, and (v) the need for, and availability of, additional financing. Forward-looking statements are based on information available at the time the statements are made and involve known and unknown risks, uncertainties and other factors that may cause our results, levels of activity, performance or achievements to be materially different from the information expressed or implied by the forward-looking statements in this report.

These factors include but are not limited to, regulatory policies or changes thereto, available cash, research and development results, issuance of patents, competition from other similar businesses, interest of third parties in collaborations with us, and market and general economic factors, and other risk factors disclosed in "Item 1A. Risk Factors" in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2020, as filed with the SEC on April 15, 2021 (the "2020 Form 10-K").

You should read these risk factors and the other cautionary statements made in the Company's filings as being applicable to all related forward-looking statements wherever they appear in this report. We cannot assure you that the forward-looking statements in this report will prove to be accurate and therefore prospective investors are encouraged not to place undue reliance on forward-looking statements. You should read this report completely. Other than as required by law, we undertake no obligation to update or revise these forward-looking statements, even though our situation may change in the future.

We caution investors not to place undue reliance on any forward-looking statement that speaks only as of the date made and to recognize that forward-looking statements are predictions of future results, which may not occur as anticipated. Actual results could differ materially from those anticipated in the forward-looking statements and from historical results, due to the risks and uncertainties described in the 2020 Form 10-K and in this report, as well as others that we may consider immaterial or do not anticipate at this time. 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 we believe that the expectations reflected in our forward-looking statements are reasonable, we do not know whether our expectations will prove correct. Our expectations reflected in our forward-looking statements can be affected by inaccurate assumptions that we might make or by known or unknown risks and uncertainties, including those described in the 2020 Form 10-K and in this report. These risks and uncertainties are not exclusive and further information concerning us and our business, including factors that potentially could materially affect our financial results or condition, may emerge from time to time.

For more information about the risks and uncertainties the Company faces, see "Item 1A. Risk Factors" in our 2020 Form 10-K, and subsequent reports and registration statements filed from time to time with the SEC. Forward-looking statements speak only as of the date they are made. The Company does not undertake and specifically declines any obligation to update any forward-looking statements or to publicly announce the results of any revisions to any statements to reflect new information or future events or developments. We advise investors to consult any further disclosures we may make on related subjects in our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K that we file with or furnish to the SEC.

PART I - FINANCIAL INFORMATION

ITEM 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

RESPIRERX PHARMACEUTICALS INC.
AND SUBSIDIARY

CONDENSED CONSOLIDATED BALANCE SHEETS

	June 30, 2021 (unaudited)	December 31, 2020
ASSETS		
Current assets:		
Cash	$ 32,056	$ 825
Deferred financing costs	-	52,609
Prepaid expenses	110,397	31,653
Total current assets	142,453	85,087
Total assets	$ 142,453	$ 85,087
LIABILITIES AND STOCKHOLDERS' DEFICIENCY		
Current liabilities:		
Accounts payable and accrued expenses, including amounts owed to related parties	$ 5,138,775	$ 4,923,947
Accrued compensation and related expenses	2,131,659	1,540,809
Convertible notes payable, including accrued interest of $98,518 and $85,693 at June 30, 2021 and December 31, 2020, respectively, which includes accrued interest to related parties (Note 4)	351,773	414,860
Note payable to SY Corporation, including accrued interest of $435,174 and $411,385 at June 30, 2021 and December 31, 2020, respectively (payment obligation currently in default – Note 4)	856,086	864,551
Notes payable to officer, including accrued interest (Note 4)	214,164	213,067
Notes payable to former officer, including accrued interest (Note 4)	195,817	186,565
Other short-term notes payable	71,060	4,608
Total current liabilities	8,959,334	8,148,407
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, issued and outstanding: 37,500; common share issuable upon conversion at 0.000030 common shares per Series B share: 1	21,703	21,703
Common stock, $0.001 par value; shares authorized: 2,000,000,000; shares issued and outstanding: 90,396,596 at June 30, 2021 and 71,271,095 at December 31, 2020, respectively (Note 2 and Note 6)	90,397	71,271
Additional paid-in capital	163,543,778	162,654,002
Accumulated deficit	(172,472,759)	(170,810,296)
Total stockholders' deficiency	(8,816,881)	(8,063,320)
Total liabilities and stockholders' deficiency	$ 142,453	$ 85,087

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

RESPIRERX PHARMACEUTICALS INC.
AND SUBSIDIARY

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)

	Three-Months Ended June 30,		Six-Months Ended June 30,	
	2021	**2020**	**2021**	**2020**
Operating expenses:				
General and administrative, including related parties	$ 426,169	$ 463,739	$ 1,071,545	$ 829,019
Research and development, including related parties	237,828	153,176	392,592	308,466
Total operating expenses	663,997	616,915	1,464,137	1,137,485
Loss from operations	(663,997)	(616,915)	(1,464,137)	(1,137,485)
Gain on warrant exchange	1,099	-	1,099	-
Loss on extinguishment of debt and other liabilities in exchange for equity	-	-	-	(323,996)
Interest expense, including related parties	(151,842)	(190,606)	(231,312)	(331,316)
Foreign currency transaction gain (loss)	2,526	(8,616)	31,887	29,942
Net loss attributable to common stockholders	$ (812,214)	$ (816,137)	$ (1,662,463)	$ (1,762,855)
Net loss per common share - basic and diluted	$ (0.01)	$ (0.01)	$ (0.02)	$ (0.04)
Weighted average common shares outstanding - basic and diluted	89,832,860	86,606,705	82,212,945	49,320,761

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

RESPIRERX PHARMACEUTICALS INC.
AND SUBSIDIARY

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIENCY
(Unaudited)

Six-months and Three-months Ended June 30, 2021

	Series B Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Deficiency
	Shares	Amount	Shares	Par Value			
Balance, December 31, 2020	37,500	$ 21,703	71,271,095	$ 71,271	$162,654,002	$(170,810,296)	$ (8,063,320)
Sale of common stock	-	-	3,600,000	3,600	113,699	-	117,299
Costs of stock issuance	-	-		-	(52,609)	-	(52,609)
Issuance of note commitment shares and beneficial conversion feature	-	-	2,000,000	2,000	95,500	-	97,500
Issuance of common stock upon conversion of convertible notes	-	-	12,625,557	12,626	239,885	-	252,511
Stock -based compensation	-	-	-	-	44,250		44,250
Adjustment due to reverse stock split	-	-	(56)	-	-	-	-
Net loss						(850,249)	(850,249)
Balance, March 31, 2021	37,500	$ 21,703	89,496,596	$ 89,497	$163,094,727	$(171,660,545)	$ (8,454,618)
Issuance of common stock upon cashless warrant exercise			900,000	900	(900)		-
Stock-based compensation					7,500		7,500
Gain on warrant exchanges					(1,099)		(1,099)
Note discounts					443,550		443,550
Net loss						(812,214)	(812,214)
Balance,June 30, 2021	37,500	$ 21,703	90,396,596	$ 90,397	$163,543,778	$ 172,472,759	$ (8,816,881)

Six-months and Three-months Ended June, 2020

	Series B Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Deficiency
	Shares	Amount	Shares	Par Value			
Balance, December 31, 2019	37,500	$ 21,703	4,175,072	$ 4,175	$159,038,388	$(166,509,085)	$ (7,444,819)
Issuances of common stock	-	-	29,518,781	29,519	910,599	-	940,118
Net loss for the three months ended March 31, 2020						(946,718)	(946,718)
Balance at March 31, 2020	37,500	$ 21,703	33,693,853	$ 33,694	$159,948,987	$(167,455,803	$ (7,451,419)
Issuances of common stock	-	-	188,613,528	188,613	142,195	-	330,808
Note discounts					90,000		90,000
Net loss						(816,137)	(816,137)
Balance, June 30, 2020	37,500	$ 21,703	222,307,381	$ 222,307	$160,181,182	$(168,271,940)	$ (7,846,748)

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

RESPIRERX PHARMACEUTICALS INC.
AND SUBSIDIARY

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

	Six-months Ended June 30,	
	2021	**2020**
Cash flows from operating activities:		
Net loss	$ (1,662,463)	$ (1,762,855)
Adjustments to reconcile net loss to net cash used in operating activities:		
Amortization of original issue discount	22,193	12,315
Amortization of capitalized note costs and debt discounts	139,396	225,300
Stock-based compensation included in -		
General and administrative expenses	36,750	-
Research and development expenses	15,000	-
Gain on warrant exchange	(1,099)	-
Loss on extinguishment of debt	-	323,996
Foreign currency transaction (gain) loss	(32,255)	(29,942)
Changes in operating assets and liabilities:		
(Increase) decrease in -		
Prepaid expenses	(78,744)	(55,552)
Fees paid with common stock	4,000	-
Increase (decrease) in -		
Accounts payable and accrued expenses	214,828	535,198
Accrued compensation and related expenses	590,850	492,243
Accrued interest payable	62,973	152,849
Net cash used in operating activities	(688,571)	(106,448)
Cash flows from financing activities:		
Proceeds from convertible note borrowings	541,050	90,000
Proceeds from common stock issuance	117,299	-
Proceeds from issuance of note payable to officer	-	1,250
Repayment of officer advance	(5,000)	-
Borrowings on short-term note payable, net of repayments	66,453	-
Net cash provided by financing activities	719,802	91,250
Cash and cash equivalents:		
Net increase/(decrease)	31,231	(15,198)
Balance at beginning of period	825	16,690
Balance at end of period	$ 32,056	$ 1,492

(Continued)

RESPIRERX PHARMACEUTICALS INC.
AND SUBSIDIARY

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

(Continued)

	Six-months Ended June 30,	
	2021	**2020**
Supplemental disclosures of cash flow information:		
Cash paid for -		
Interest	$ 2,926	$ 1,498
Income taxes	$ -	$ -
Non-cash financing activities:		
Amortization of deferred financing costs	$ 52,609	$ -
Debt discounts established for convertible debt	$ 541,050	$ 90,000
Issuance of common stock for accrued compensation and benefits	$ -	$ 306,000
Debt and accrued interest converted to common stock	$ 4,000	$ 950,241
Cashless warrant exercises	$ 900	$ 15,638

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

RESPIRERX PHARMACEUTICALS INC.
AND SUBSIDIARY

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

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 (as amended, the "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. In August 2012, RespireRx acquired Pier Pharmaceuticals, Inc. ("Pier"), which is now a wholly owned subsidiary. Pier was a clinical stage biopharmaceutical company developing a pharmacologic treatment for obstructive sleep apnea ("OSA") and had been engaged in research and clinical development activities which activities are now in RespireRx.

Basis of Presentation

The condensed consolidated financial statements are of RespireRx and its wholly-owned subsidiary, Pier (collectively referred to herein as the "Company," "we" or "our," unless the context indicates otherwise). The condensed consolidated financial statements of the Company at June 30, 2021 and for the three-months and six-months ended June 30, 2021 and 2020, 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 June 30, 2021, the results of its condensed consolidated operations for the three-months and six-months ended June 30, 2021 and 2020, changes in its condensed consolidated statements of stockholders' deficiency for the three-months and six-months ended June 30, 2021 and 2020 and its condensed consolidated cash flows for the six-months ended June 30, 2021 and 2020. 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, 2020 has been derived from the Company's audited consolidated financial statements at such date. For comparative purposes, certain 2021 and 2020 amounts, including, but not limited to, share and per share amounts, par value and additional paid-in capital have been adjusted to a post-reverse stock split basis which occurred on January 5, 2021.

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 note disclosures normally included in financial statements prepared in accordance with United States generally accepted accounting principles ("GAAP") 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 at December 31, 2020 ("2020 Form 10-K).

2. Business

The mission of the Company is to develop innovative and revolutionary treatments to combat disorders caused by disruption of neuronal signaling. We are developing treatment options that address conditions that affect millions of people, but for which there are limited or poor treatment options, including obstructive sleep apnea ("OSA"), attention deficit hyperactivity disorder ("ADHD"), epilepsy, chronic pain, including inflammatory and neuropathic pain, recovery from spinal cord injury ("SCI"), as well as other areas of interest based on results of preclinical and clinical studies to date.

RespireRx is developing a pipeline of new drug products based on our broad patent portfolios across two distinct drug platforms:

(i) our pharmaceutical cannabinoids platform (which we refer to as ResolutionRx) is developing compounds that target the body's endocannabinoid system, and in particular, the re-purposing of dronabinol, an endocannabinoid CB1 and CB2 receptor agonist, for the treatment of OSA. Dronabinol is already approved by the FDA for other indications.

(ii) our neuromodulators platform (which we refer to as EndeavourRx) is made up of two programs: (a) our AMPAkines program, which is developing proprietary compounds that are positive allosteric modulators ("PAMs") of AMPA-type glutamate receptors to promote neuronal function and (b) our GABAkines program, which is developing proprietary compounds that are PAMs of GABAA receptors, and which was recently established pursuant to our entry with the University of Wisconsin-Milwaukee Research Foundation, Inc., an affiliate of the University of Wisconsin-Milwaukee ("UWMRF"), into a patent license agreement (the "UWMRF Patent License Agreement").

Financing our Platforms

Our major challenge has been to raise substantial equity or equity-linked financing to support research and development plans for our pharmaceutical cannabinoid and neuromodulator platforms, while minimizing the dilutive effect to pre-existing stockholders. At present, we believe that we are hindered primarily by our public corporate structure, our OTCQB listing, and low market capitalization as a result of our low stock price.

For this reason, the Company has implemented an internal restructuring plan through which our two drug platforms have been reorganized into separate business units and may in the future be organized into subsidiaries of RespireRx. We believe that by creating one or more subsidiaries to further the aims of ResolutionRx and EndeavourRx, it may be possible, through separate finance channels, to optimize the asset values of each. We are also planning to commence, assuming the SEC qualifies the offering, a securities offering pursuant to Regulation A under the Securities Act. See Note 9. Subsequent Events – *Filing of Form 1-A* for further information.

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 $812,214 and $1,662,463 for the three-months and six-months ended June 30, 2021, respectively, and $4,301,211 for the fiscal year ended December 31, 2020, as well as negative operating cash flows of $688,571 for the six-months ended June 30, 2021 and $513,001 for the fiscal year ended December 31, 2020. The Company also had a stockholders' deficiency of $8,816,881 at June 30, 2021 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, 2020, 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.

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 assurance 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 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.

Reverse Stock Split on January 5, 2021

On January 5, 2021, the Company effected a ten to one reverse-stock split of its common stock. Every ten shares of the "old" common stock was exchanged for one "new" share of common stock rounded down to the nearest whole share with any fractional shares of common stock paid to the stockholder in cash. Option and warrant issuances prior to January 5, 2021 have also been proportionately adjusted by dividing the number of shares into which such options and warrants may exercise by ten and multiplying the exercise price by ten. The effect of the reverse-stock split has been reflected retroactively in the Company's consolidated financial statements as of December 31, 2020 and any interim periods in 2020. Certain amount with respect to 2019 that appear in these condensed consolidated financial statements have also been reflected on a post reverse-stock split basis.

Concentration 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.

Value of Financial Instruments

The authoritative guidance with respect to value of financial instruments established a value hierarchy that prioritizes the inputs to valuation techniques used to measure value into three levels and requires that assets and liabilities carried at 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 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 value hierarchy within which each value measurement falls in its entirety, based on the lowest level input that is significant to the 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, and accounts payable and accrued expenses) are considered by the Company to be representative of the respective values of these instruments due to the short-term nature of those instruments. With respect to the note payable to SY Corporation Co., Ltd. ("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 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 equity financings are netted against the proceeds.

Debt Issuance Costs

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

Convertible Notes Payable

Convertible notes are evaluated to determine if they should be recorded at amortized cost. To the extent that there are associated warrants, commitment shares of common stock or a beneficial conversion feature, the convertible notes and equity or equity-linked securities are evaluated to determine if there are embedded derivatives to be identified, bifurcated and valued in connection with and at the time of such financing.

Extinguishment of Debt and Settlement of Liabilities

The Company accounts for the extinguishment of debt and settlement of liabilities by comparing the carrying value of the debt or liability to the 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. See Note 4 for additional information.

Prepaid Insurance

Prepaid insurance represents the premiums paid in March 2021 for directors and officers insurance and other insurance in April 2021. The amounts of prepaid insurance amortizable in the ensuing twelve-month period are recorded as prepaid insurance in the Company's consolidated balance sheet at each reporting date and amortized to the Company's consolidated statement of operations for each reporting period.

Stock-Based Awards

The Company periodically issues common stock and stock options to officers, directors, Scientific Advisory Board members, consultants and vendors 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, directors, outside consultants and vendors 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 consolidated financial statements over the vesting period of the awards.

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

The value of stock options granted as stock-based payments 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 and stock option grants 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.

There were no stock or stock option grants during the six-months ended June 30, 2021.

The Company recognizes the amortized value of stock-based payments 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 six-months ended June 30, 2021 and 2020, respectively.

There were warrants to purchase 380,568 shares of common stock issued as compensation or for services during the six-months ended June 30, 2021 and none during the six-months ended June 30, 2020. Warrants, if issued for services, are typically issued to placement agents or brokers for fund raising services. In addition warrants to purchase 11,256,333 shares of common stock were issued during the six-months ended June 30, 2021 to lenders with respect to or in association with the issuance of convertible notes to such lenders. Warrant are not issued from any of the Company's stock and option plans, from which options issued to non-employees for services are typically issued.

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 June 30, 2021, 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 June 30, 2021, 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, including but not limited to compensation paid to our Chief Scientific Officer who is also our Executive Chairman, 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.

License Agreements

Obligations incurred with respect to mandatory payments provided for in license agreements are recognized ratably over the appropriate term, 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 expenses in the Company's condensed consolidated statement of operations.

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 and recorded as general and administrative expenses.

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 loss attributable to common stockholders consists of net 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 June 30, 2021 and 2020 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.

	June 30,	
	2021	**2020**
Series B convertible preferred stock	1	1
Convertible notes payable	33,623,313	5,557,827
Common stock warrants	38,633,473	12,451,465
Common stock options	7,112,907	418,863
Total	79,369,694	18,428,156

Reclassifications

Certain comparative figures in 2020 have been reclassified to conform to the current quarter's presentation. These reclassifications were immaterial, both individually and in the aggregate.

Recent Accounting Pronouncements

In August 2020, the FASB issued Accounting Standards Update No. 2020-06, Debt – Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40). The subtitle is Accounting for Convertible Instruments and Contracts in an Entity's Own Equity. This Accounting Standard Update ("ASU") addresses complex financial instruments that have characteristics of both debt and equity. The application of this ASU would reduce the number of accounting models for convertible debt instruments and convertible preferred stock. Limiting the accounting models would result in fewer embedded conversion features being separately recognized from the host contract as compared with current GAAP. Convertible instruments that continue to be subject to separation models are (1) those with embedded conversion features that are not clearly and closely related to the host contract, that meet the definition of a derivative, and that do not qualify for a scope exception from derivative accounting and (2) convertible debt instruments issued with substantial premiums for which the premiums are recorded as paid-in capital. The Company has historically issued complex financial instruments and has considered whether embedded conversion features have existed within those contracts or whether derivatives would appropriately be bifurcated. To date, no such bifurcation has been necessary. However, it is possible that this ASU may have a substantial impact on the Company's financial statements. Management is evaluating the potential impact. This ASU becomes effective for fiscal years beginning after December 15, 2023.

In January 2020, the FASB issued ASU 2020-01, Clarifying the Interactions between Topic 321, Topic 323, Equity Method and Joint Ventures, and Topic 815, Derivatives and Hedging which represents an amendment clarifying the interaction between accounting standards related to equity securities, equity method investments and certain derivatives. The guidance is effective for fiscal years beginning after December 15, 2020. Management is currently evaluating the impact the guidance will have on our consolidated financial statements.

4. Notes Payable

Convertible Notes Payable

On April 1, 2021, May 3, 2021, May 10, 2021 and June 30, 2021, the Company closed on financings, pursuant to which, four convertible notes were issued to three separate investors, due in each case, one year from the effective date (which for the first, second and fourth closings was March 31, 2021, April 30, 2021 and June 29, 2021, respectively), with maturity amounts of $112,500, $150,000, $150,000 and $115,000, respectively. In addition, the noteholders received as consideration, warrants to purchase 2,400,000, 3,200,000, 3,200,000 and 2,453,333 shares of common stock, respectively, each exercisable at $0.02 per share for five years. The Company received net proceeds of $96,750, $123,400, $123,400 and $100,000 respectively, for an aggregate of $443,550. The difference between the maturity amounts and the net proceeds were due to original issue discounts, investor legal fees and in two cases, broker fees. The four notes are convertible at a fixed price of $0.02 per share and bear interest at 10% per year which interest is guaranteed regardless of prepayment. The Company has the right to prepay the notes during the first six months subject to prepayment premiums that range from 0% to 15% (100% to 115% of the maturity amount plus accrued interest and any default interest and similar costs).

The Company periodically issues convertible notes with similar characteristics. As described in the table below, during the six-months ended June 30, 2021, there were eight such notes outstanding (including the convertible notes described in the paragraph above), two of which were satisfied in full by conversion of both principal and interest and one of which was satisfied in part, principal only, during that period. These notes all have or had a fixed conversion price of $0.02 per share of common stock, subject to adjustment in certain circumstances. All notes but one had an annual interest rate of 10% which was guaranteed in full. One note had an annual interest rate of 8%. The convertible notes had an original issue discount ("OID"), debt issuance costs ("DIC") that were capitalized by the Company, a warrant ("WT") or commitment shares ("CS") and in two cases a beneficial conversion feature ("BCF"). The OID, CN, WTs, CSs and BCF allocated values are amortized over the life of the notes to interest expense. All notes mature or matured nine to fifteen months from their issuance date. All notes were prepayable by the Company during the first six months, subject to prepayment premiums that range from 100% to 115% of the maturity amount plus accrued interest. If not earlier paid, the notes were convertible by the holder into the Company's common stock. Two of the notes were paid before maturity.

The table below summarizes the convertible notes with similar characteristics outstanding as of June 30, 2021 and the repayments by conversion during the six-months ended June 30, 2021:

Inception Date	Maturity date	Original Principal Amount	Interest rate	Original aggregate DIC, OID, Wts, CS and BCF	Cumulative amortization of DIC, OID, Wts, CS and BCF	Accrued coupon interest	Repayment by conversion	Balance sheet carrying amount at June 30, 2021 inclusive of accrued interest
July 2, 2020	April 2, 2021	$ 137,500	10.00%	$ (44,423)	$ 44,423	$ 6,875	$ (144,375)	$ -
July 28, 2020	July 28, 2021	$ 40,000	8.00%	$ —	$ —	$ 2,368	$ (25,000)	$ 17,368
July 30, 2020	October 30, 2021	$ 75,000	10.00%	$ (27,778)	$ 27,778	$ 4,136	$ (79,136)	$ -
February 17, 2021	November 17, 2021	$ 112,000	10.00%	$ (112,000)	$ 16,531	$ 5,386	$ -	$ 59,251
April 1, 2021	March 31, 2022	$ 112,500	10.00%	$ (112,500)	$ 28,048	$ 2,805	$ -	$ 30,853
May 3, 2021	April 30, 2022	$ 150,000	10.00%	$ (150,000)	$ 25,068	$ 2,507	$ -	$ 27,575
May 10, 2021	May 10, 2022	$ 150,000	10.00%	$ (150,000)	$ 20,959	$ 2,096	$ -	$ 23,055
June 30, 2021	June 29, 2022	$ 115,000	10.00%	$ (115,000)	$ 315	$ 32	$ -	$ 347
Total		$ 892,000		$ (711,701)	$ 163,122	$ 26,205	$ (248,511)	$ 158,449

In addition to what appears in the table above, there is outstanding accrued interest of $2,747 from a prior floating rate convertible note that has not been paid in cash or by conversion as of June 30, 2021.

On July 27, 2021, the maturity date of the note scheduled to mature on July 28, 2021 was extended to December 1, 2021 and the original and remaining principal amount of the note was increased by $5,000 from $40,000 to $45,000 and from $15,000 to $20,000 respectively, with interest on the incremental increase in principal amount accruing from the note inception date. See Note 9 for additional information.

In addition to the convertible notes with similar characteristics described above, on December 31, 2018 and January 2, 2019, the Company issued convertible notes to a single investor totaling $35,000 of maturity amount with accrued interest of $9,321 as of June 30, 2021. The number of shares of common stock (or preferred stock) into which these notes may convert is not determinable. The warrants to purchase 19,000 shares of common stock issued in connection with the sale of these notes and other convertible notes issued December 2018 and March 2019 are exercisable at a fixed price of $15.00 per share of common stock, provide 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 and expire on December 30, 2023.

Other convertible notes were also sold to investors in 2014 and 2015 (“Original Convertible Notes”), which aggregated a total of $579,500, and had a fixed interest rate of 10% per annum. The Original Convertible Notes have no reset rights or other protections based on subsequent equity transactions, equity-linked transactions or other events. The warrants to purchase shares of common stock issued in connection with the sale of the Original Convertible Notes have either been exchanged as part of note and warrant exchange agreements executed in April and May of 2016 or expired on September 15, 2016.

The remaining outstanding Original Convertible Notes (including those for which default notices have been received) consist of the following at June 30, 2021 and December 31, 2020:

	June 30, 2021	December 31, 2020
Principal amount of notes payable	$ 75,000	$ 75,000
Accrued interest payable	71,256	64,357
	$ 146,256	$ 139,357

As of June 30, 2021, principal and accrued interest on the Original Convertible Note that is subject to a default notice accrues annual interest at 12% instead of 10%, totaled $51,111, of which $26,111 was accrued interest. As of December 31, 2020, principal and accrued interest on Original Convertible Notes subject to default notices totaled $48,700 of which $23,700 was accrued interest.

As of June 30, 2021 all of the outstanding Original Convertible Notes, inclusive of accrued interest, were convertible into an aggregate of 1,286 shares of the Company's common stock. Such Original Convertible Notes will continue to accrue interest until exchanged, paid or otherwise discharged. There can be no assurance that any of the additional holders of the remaining Original Convertible Notes will exchange their Original Convertible 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 as of that date) from and executed a secured note payable to SY Corporation Co., Ltd., ("SY Corporation"). 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 six-months ended June 30, 2021, 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, dating back to January, August and September 2007, 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 that the Company is no longer developing and where patent rights date back to January, August and September 2007. The security interest does not extend to the Company's patents for its low impact ampakine compounds, such as CX717, CX1739 and CX1942 or certain related method of use patents.

The note payable to SY Corporation consists of the following at June 30, 2021 and December 31, 2020:

	June 30, 2021	December 31, 2020
Principal amount of note payable	$ 399,774	$ 399,774
Accrued interest payable	435,174	411,384
Foreign currency transaction adjustment	21,138	53,393
	$ 856,086	$ 864,551

Interest expense with respect to this promissory note was $23,789 and $23,921 for the six-months ended June 30, 2021 and 2020, respectively, and $11,960 for the three-months ended June 30, 2021 and 2020.

Notes Payable to Officers and Former Officers

The following amounts were charged to interest expense with respect to notes payable to Dr. Arnold S. Lippa: $3,062 and $2,817 for the three-months ended June 30, 2021 and 2020, respectively, and $ 6,097 and $5,633 for the six-months ended June 30, 2021 and 2020, respectively.

The following amounts were charged to interest expense with respect to notes payable to Dr. James S. Manuso: $4,651 and $4,228 for the three-months ended June 30, 2021 and 2020, respectively, and $9,252 and $8,439 for the six-months ended June 30, 2021 and 2020, respectively.

As of September 30, 2018, Dr. James S. Manuso resigned as executive officer in all capacities and as a member of the board of directors of RespireRx (the "Board of Directors").

Other Short-Term Notes Payable

Other short-term notes payable at June 30, 2021 and December 31, 2020 consisted of premium financing agreements with respect to various insurance policies. At June 30, 2021, a premium financing agreement was payable in the initial amount of $81,672 (after payment of a deposit of $20,347), with interest at 11% per annum, in eight monthly installments of $10,635. In addition, there is $9,238 of short-term financing of office and clinical trials insurance premiums. At June 30, 2021 and December 31, 2020, the aggregate amount of the short-term notes payable was $71,060 and $4,608 respectively.

5. Settlement and Payment Agreements

On February 21, 2020, Sharp Clinical Services, Inc. ("Sharp"), a vendor of the Company, filed a complaint against the Company in the Superior Court of New Jersey Law Division, Bergen County related to a December 16, 2019 demand for payment of past due invoices inclusive of late fees totaling $103,890 of which $3,631 related to late fees, seeking $100,259 plus 1.5% interest per month on outstanding unpaid invoices. On May 29, 2020, a default was entered against the Company, and on September 4, 2020, a final judgment by default was entered against the Company in the amount of $104,217. On March 3, 2021, we executed a settlement agreement with Sharp (the "Sharp Settlement Agreement"), and on March 9, 2021, Sharp requested of the Bergen (NJ) County Sheriff, the return of the Writ of Execution which resulted in a release of the lien in favor of Sharp. The Sharp Settlement Agreement calls for a payment schedule of ten $10,000 payments due on April 1, 2021 and every other month thereafter, and permitted early settlement at $75,000 if the Company had paid Sharp that lower total by August 1, 2021, but the Company did not pay Sharp that lower amount by that date. The Company has recorded a liability to Sharp of $83,859 as of June 30, 2021 after payments totaling $20,000 pursuant to the Sharp Settlement Agreement ..

By letter dated February 5, 2016, the Company received a demand from a law firm representing Salamandra, LLC ("Salamandra") alleging an amount due and owing for unpaid services rendered. On January 18, 2017, following an arbitration proceeding, an arbitrator awarded Salamandra the full amount sought in arbitration of $146,082. Additionally, the arbitrator granted Salamandra attorneys' fees and costs of $47,937. All such amounts have been accrued as of June 30, 2021 and December 31, 2020, including accrued interest at 4.5% annually from February 26, 2018, the date of the judgment, through June 30, 2021, totaling $27,954. The Company had previously entered into a settlement agreement with Salamandra that is no longer in effect. RespireRx has approached Salamandra seeking to negotiate a new settlement agreement. A lien with respect to the amounts owed is in effect.

On February 23, 2021, our bank received two New Jersey Superior Court Levies totaling $320,911 related to amounts owed to Sharp and Salamandra which amounts were not in dispute. The bank debited our accounts and restricted access to those accounts pursuant to the liens placed on the accounts. Our accounts were debited for $1,559 on February 23, 2021, which represented all of the cash in our accounts on that date.

On April 29, 2021, RespireRx entered into a payment and settlement agreement with the University of California Innovation and Entrepreneurship, pursuant to which it agreed to a payment schedule that is reflected in accounts payable and accrued expenses in the Company's condensed consolidated financial statements as of June 30, 2021. The total amount due is $234,657. The agreed payment schedule is for the Company to pay $10,000 on each of July 1, 2021, September 1, 2021, November 1, 2021, January 1, 2022 and March 31, 2022. If RespireRx pays an aggregate of $175,000 on or before March 31, 2022, the amounts will be considered paid in full with no further amounts due. If an aggregate of $175,000 has not been paid by March 31, 2022, the remaining unpaid amount up to an aggregate of the original amount of $234,657 would be due and payable. The payment due on July 1, 2021 was timely paid.

The due date of the $100,000 annual amount payable to the University of Illinois that was originally due on December 31, 2020 pursuant to the 2014 License Agreement was extended to April 19, 2021 and was paid in full on April 1, 2021 .

By email 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 payable for investment banking services rendered. Such amount has been included in accrued expenses at June 30, 2021 and December 31, 2020. See Note 1 for additional information on the Pier transaction.

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 as of June 30, 2021 and December 31, 2020 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.

6. Stockholders' Deficiency

Preferred Stock

RespireRx has authorized a total of 5,000,000 shares of preferred stock, par value $0.001 per share. As of June 30, 2021 and December 31, 2020, 37,500 shares were designated as Series B Convertible Preferred Stock (non-voting, "Series B Preferred Stock").

Series B Preferred Stock outstanding as of June 30, 2021 and 2020 consisted of 37,500 shares issued in a May 1991 private placement. The shares of Series B Preferred Stock are convertible into 1 share of common stock. RespireRx may redeem the Series B Preferred Stock for $25,001 at any time upon 30 days prior notice.

Although other series of preferred stock have been designated, no other shares of preferred stock are outstanding. As of June 30, 2021 and December 31, 2020, 3,504,424 shares of preferred stock were undesignated and may be issued with such rights and powers as the Board of Directors may designate.

Common Stock

RespireRx has authorized 2,000,000,000 (2 billion) shares of common stock, par value $0.001 per share. There are 90,396,596 shares of the Company's common stock outstanding as of June 30, 2021. After reserving for conversions of convertible debt and convertible preferred stock, as well as exercises of common stock purchase options (granted and available for grant within the 2014 and 2015 stock and stock option plans) and warrants and the issuance of Pier contingent shares and before accounting for incremental contract excess reserves, there were 1,821,470,177 shares of the Company's common stock available for future issuances as of June 30, 2021. After accounting for incremental excess reserves contractually required by the various convertible notes and certain warrants, there were 1,744,916,143, shares of common stock available for future issuances as of June 30, 2021. On May 27, 2021, a holder of a warrant exercised the warrant in part, exercising into 900,000 shares of common stock on a cashless basis, what would have exercised into 1,665,958 shares of common stock on a cash basis. The Company did not receive any cash proceeds from the exercise. No other warrants were exercised during the six-months ended June 30, 2021. No options were exercised during the six-months ended June 30, 2021. No warrants or options were exercised after June 30, 2021.

Common Stock Warrants

A summary of warrant activity for the six-months ended June 30, 2021 is presented below.

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in Years)
Warrants outstanding at December 31, 2020	28,809,352	$ 0.1528	2.64
Issued	12,561,174	0.02	
Expired	(8,595)		
Cancelled upon exchange	(1,062,500)	0.07	
Exercised	(1,665,958)	0.02	
Warrants outstanding at June 30, 2021	38,633,473	$ 0.1002	1.78
Warrants exercisable at June 30, 2020	12,451,465	$ 0.3272	3.79
Warrants exercisable at June 30, 2021	38,633,473	$ 0.1002	1.78

The exercise prices of common stock warrants outstanding and exercisable are as follows at June 30, 2021:

Exercise Price	Warrants Outstanding and Exercisable (Shares)	Expiration Date
$ 0.016	2,212,500	May 17, 2022
$ 0.020	10,514,648	March 31, 2026-June 30, 2021
$ 0.039	208,227	May 10, 2026
$ 0.047	172,341	May 3, 2026
$ 0.070	25,377,426	September 30, 2023
$ 11.00 -27.50	148,331	December 31, 2021-December 30, 2023
	38,633,473	

Based on a value of $0.0365 per share on June 30, 2021, there were 12,727,148 exercisable in-the-money common stock warrants as of June 30, 2021.

A summary of warrant activity for the six-months ended June 30, 2020 is presented below.

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in Years)
Warrants outstanding at December 31, 2019	219,104	$ 18.7109	3.44000
Warrants issued due to anti-dilution provisions increasing number of originally issued warrants included in December 31, 2019 balance	13,882,479	0.0153	3.70650
Exercised	(1,650,118)	0.0157	-
Warrants outstanding and exercisable at June 30, 2020	12,451,465	$ 0.3272	3.78506

The exercise prices of common stock warrants outstanding and exercisable at June 30, 2020 ranged from $0.01485 to $79.30 and these warrants were exercisable into an aggregate of 12,451,465 shares, which warrants have expired or will expire, as applicable, between February 28, 2021 and October 22, 2024.

Based on a value of $0.064 per share on June 30, 2020, there were 12,269,098 exercisable in-the-money common stock warrants as of that date.

Stock Options

On March 18, 2014, the stockholders of RespireRx holding a majority of the votes to be cast on the issue approved the adoption of RespireRx's 2014 Equity, Equity-Linked and Equity Derivative Incentive Plan (the "2014 Plan"), which had been previously adopted by the Board of Directors, subject to stockholder approval. The Plan permits the grant of options and restricted 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 (as amended, the "2015 Plan"). As of June 30, 2021, there are 8,756,559 shares available in the 2015 Plan. The Company has not and does not intend to present the 2015 Plan to stockholders for approval.

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

A summary of stock option activity for the six-months ended June 30, 2021 is presented below.

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in Years)
Options outstanding at December 31, 2020	7,165,215	$ 1.96	4.98
Expired	(52,308)	73.78	-
Options outstanding at June 30, 2021	7,112,907	$ 1.43	4.13
Options exercisable at June 30, 2021	7,062,907	$ 1.44	4.13

The exercise prices of common stock options outstanding and exercisable were as follows at June 30, 2021:

Exercise Price	Options Outstanding (Shares)	Options Exercisable (Shares)	Expiration Date
$ 0.0540	1,700,000	1,650,000	September 30, 2025
$ 0.072	5,050,000	5,050,000	July 31, 2025
$ 7.00-$195.00	362,907	362,907	September 12, 2021 - December 9, 2027
	7,112,907	7,062,907	

There was no deferred compensation expense for the outstanding and unvested stock options at June 30, 2021.

Based on a fair value of $0.0365 per share on June 30, 2021, there were no exercisable in-the-money common stock options as of that date.

Reserved and Unreserved Shares of Common Stock

As of June 30, 2021, there are 2,000,000,000 shares of common stock authorized, of which 90,396,596 are issued and outstanding. As of June 30, 2021, there are outstanding options to purchase 7,112,907 share of common stock and 6,325 and 8,756,559 shares available for issuance under the 2014 Plan and 2015 Plan, respectively. There are 649 Pier contingent shares of common stock that may be issued under certain circumstances. As of June 30, 2021, there are 33,623,313 shares issuable upon conversion of convertible notes. As of June 30, 2021, there are 38,633,473 shares that may be issued upon exercise of outstanding warrants. As of June 30, 2021, the Series B Preferred Stock may convert into 1 share of common stock. Therefore, the Company is reserving 88,133,227 shares of common stock for future issuances with respect to conversions and exercises as well as for the Pier contingent shares. In addition, certain convertible notes and related warrants impose an additional contractual reserve requirement, above the number of shares into which such convertible notes and related warrants may convert or exercise respectively. Although the Company does not anticipate having to issue such shares, such incremental additional contractual reserves total 76,554,034 shares of common stock.

7. Related Party Transactions

Dr. Arnold S. Lippa and Jeff E. Margolis, officers and directors of RespireRx since March 22, 2013, have indirect ownership and managing membership interests in Aurora Capital LLC (“Aurora”) through interests held in its members, and Jeff. E. Margolis is also an officer of Aurora. Aurora was a boutique investment banking firm specializing in the life sciences sector that ceased its securities related activities in April 2021. On May 5, 2021, Aurora filed to withdraw its membership with FINRA and its registration with the SEC which withdrawal became effective in July 2021. Although Aurora has not provided services to RespireRx during the six-months ended June 30, 2021 or the fiscal year ended December 31, 2020, Aurora had previously provided services to the Company and there remains $96,000 owed to Aurora by RespireRx which amount is included in accounts payable and accrued expenses as of June 30, 2021.

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

8. Commitments and Contingencies

Pending or Threatened Legal Action and Claims

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 condensed consolidated financial statements as of June 30, 2021 and 2020 with respect to such matters. See Note 5 for additional items and details.

On April 29, 2021, RespireRx entered into a payment and settlement agreement with the University of California Innovation and Entrepreneurship, pursuant to which it agreed to a payment schedule that is reflected in accounts payable and accrued expenses in the Company’s condensed consolidated financial statements as of June 30, 2021. The total amount due is $234,657. The agreed payment schedule is for the Company to pay $10,000 on each of July 1, 2021, September 1, 2021, November 1, 2021, January 1, 2022 and March 31, 2022. If RespireRx pays an aggregate of $175,000 on or before March 31, 2022, the amounts will be considered paid in full with no further amounts due. If an aggregate of $175,000 has not been paid by March 31, 2022, the remaining unpaid amount up to an aggregate of the original amount of $234,657 would be due and payable. The payment due on July 1, 2021 was timely paid.

Significant Agreements and Contracts

Consulting Agreements

Richard Purcell, the Company’s Senior Vice President of Research and Development on at-will basis since October 15, 2014, provides his services to the Company on a month-to-month basis through his consulting firm, DNA Healthlink, Inc. (“DNA Healthlink”), through which the Company has contracted for his services for a monthly cash fee of $12,500. Cash compensation expense pursuant to this agreement totaled $0 and $37,500 for the three-months ended June 30, 2021 and 2020, respectively, and $0 and $75,000 for the six-months ended June 30, 2021 and 2020, respectively, which is included in research and development expenses in the Company’s condensed consolidated statements of operations for such periods. Mr. Purcell provided services to the Company through DNA Healthlink at a rate of $250 per hour and totaled $5,000 during the three-months and six-months ended June 30, 2021, respectively. Mr. Purcell and the Company are in discussions intended to amend the contract with DNA Healthlink to define going-forward services to be provided to the Company and establish a rate therefore and to establish a payment schedule for amounts due to DNA Healthlink currently recorded in accounts payable.

The Company entered into a consulting contract with David Dickason effective September 15, 2020 pursuant to which Mr. Dickason was appointed to and serves as the Company's Senior Vice President of Pre-Clinical Product Development on an at-will basis at the rate of $250 per hour. The Company recorded, but did not pay cash compensation expense pursuant to this agreement of $72,375 for the six-months ended June 30, 2021.

Employment Agreements

Timothy L. Jones, Arnold S. Lippa and Jeff E. Margolis have similar employment agreements. Mr. Jones was appointed as RespireRx's President and Chief Executive Officer on May 6, 2020. Dr. Lippa is RespireRx's Chief Scientific Officer and Executive Chairman and Mr. Margolis is the Company's Senior Vice President, Chief Financial Officer, Treasurer and Secretary. Dr. Lippa's and Mr. Margolis' employment agreements became effective on August 18, 2015. All three agreements are subject to automatic annual extensions on September 30th of each year beginning with the initial termination date if not earlier terminated, subject to notice in accordance with the terms of the agreements. Mr. Jones' initial termination date is September 30, 2023 and Dr. Lippa's and Mr. Margolis' agreements are in their automatic extension periods.

The table below summarized the current cash commitments to each individual through the next September 30th renewal date and in the case of Mr. Jones, through September 30, 2023.

	Contract year ending September 30, 2021				Contract year ending September 30, 2022				Contract year ending September 30, 2023			
	Three months				Twelve months				Twelve months			
	Base Salary	Benefits	Guaranteed Bonus	Total	Base Salary	Benefits	Guaranteed Bonus	Total	Base Salary	Benefits	Guaranteed Bonus	Total
Timothy L. Jones	$ 75,000	$ 9,900	$ 150,000	$234,900	$300,000	$ 39,600	$ 300,000	$639,600	$300,000	$ 39,600	$ 300,000	$639,600
Arnold S. Lippa	75,000	9,900	-	84,900	—	—	—	—	—	—	—	—
Jeff E. Margolis	75,000	5,400	—	80,400	—	—	—	—	—	—	—	—
	$225,000	$ 25,200	$ 150,000	$400,200	$300,000	$ 39,600	$ 300,000	$639,600	$300,000	$ 39,600	$ 300,000	$639,600

Under certain circumstances base salaries may be contractually increased or the executives may become eligible for additional benefits and base salaries may be increased at the discretion of the Board of Directors. All executives are eligible for stock and stock option and similar grants at the discretion of the Board or Directors.

The payment of certain amounts reflected in the table above have been voluntarily deferred indefinitely and payments against accrued compensation may be made based upon the Company's ability to make such payments.

UWMRF Patent License Agreement

On August 1, 2020, the ("Effective Date"), the Company and UWMRF executed the UWMRF Patent License Agreement pursuant to which, the Company has an exclusive license to commercialize GABAkine products based on UWMRF's rights in certain patents and patent applications, and a non-exclusive license to commercialize products based on UWMRF's rights in certain technology that is not the subject of the patents or patent applications. UWMRF maintains the right to use, and, upon the approval of the Company, to license, these patent and technology rights for any non-commercial purpose, including research and education. The UWMRF Patent License Agreement expires upon the later of the expiration of the Company's payment obligations to UWMRF or the expiration of the last remaining licensed patent granted thereunder, subject to early termination upon the occurrence of certain events. The License Agreement also contains a standard indemnification provision in favor of UWMRF and confidentiality provisions obligating both parties.

Under the UWMRF Patent License Agreement, in consideration for the licenses granted, the Company will pay to UWMRF the following: (i) patent filing and prosecution costs incurred by UWMRF prior to the effective date, paid in yearly installments over three years from the Effective Date; (ii) annual maintenance fees, beginning on the second anniversary of the Effective Date, which annual maintenance fees terminate upon the Company's payment of royalties pursuant to clause (iv) below; (iii) milestone payments, paid upon the occurrence of certain dosing events of patients during clinical trials and certain approvals by the FDA; and (iv) royalties on net sales of products developed with the licenses, subject to minimum annual payments and to royalty rate adjustments based on whether separate royalty payments by the Company yield an aggregate rate beyond a stated threshold. The Company has also granted UWMRF certain stock appreciation rights with respect to the Company's neuromodulator programs, subject to certain limitations, and will pay to UWMRF certain percentages of revenues generated from sublicenses of the licenses provided under the UWMRF Patent License Agreement by the Company to third parties.

University of Wisconsin-Milwaukee Outreach Services Agreement

On July 12, 2021, the Company and the Board of Regents of the University of Wisconsin System on behalf of the University of Wisconsin-Milwaukee ("UWM") entered into an Outreach Services Agreement pursuant to which UWM agreed to provide, among other molecules, multiple milligram to gram quantities of KRM-II-81 (GABAkine) and the Company agreed to pay UWM an annual sum of $75,000 payable in three installments of $25,000 each beginning October 12, 2021 and on a quarterly basis thereafter. The agreement terminates on June 30, 2022 unless extended upon consent of both parties. See Note 9 for additional information.

University of Illinois 2014 Exclusive License Agreement

The Company and the University of Illinois entered into the Exclusive License Agreement (the "2014 License Agreement") effective September 18, 2014, pursuant to which the Company obtained (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 that commenced 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 obligation of $100,000 due on December 31, 2020, was extended to April 19, 2021 and was paid in full on April 1, 2021. One-time milestone payments may become due based upon the achievement of certain development milestones. $350,000 will be due within five days after the dosing of the first patient is a Phase III human clinical trial anywhere in the world. $500,000 will be due within five days after the first NDA filing with FDA or a foreign equivalent. $1,000,000 will be due within twelve months of the first commercial sale. One-time royalty payments may also become due and payable. Annual royalty payments may also become due. In the year after the first application for market approval is submitted to the FDA or a foreign equivalent 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 or a foreign equivalent 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 charges to operations of $25,000 during the three-months ended June 30, 2021 and 2020, respectively, and $50,000 during the six-months ended June 30, 2021 and 2020, respectively, with respect to its 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 and six-months ended June 30, 2021 and 2020. As discussed above, the Company did not pay the amount due on December 31, 2020 for which the Company was granted an extension until April 19, 2021 and which was paid in full on April 1, 2021.

Noramco Inc. - Dronabinol Development and Supply Agreement

On September 4, 2018, RespireRx entered into a dronabinol Development and Supply Agreement with Noramco Inc., one of the world's major dronabinol manufacturers, which Noramco subsequently assigned to its subsidiary, Purisys LLC (the "Purisys Agreement"). Under the terms of the Purisys Agreement, Purisys has agreed to (i) provide all of the active pharmaceutical ingredient ("API") estimated to be needed for the clinical development process for both the first- and second-generation products (each a "Product" and collectively, the "Products"), three validation batches for New Drug Application ("NDA") filing(s) and adequate supply for the initial inventory stocking for the wholesale and retail channels, subject to certain limitations, (ii) maintain or file valid drug master files ("DMFs") with the FDA or any other regulatory authority and provide the Company with access or a right of reference letter entitling the Company to make continuing reference to the DMFs during the term of the agreement in connection with any regulatory filings made with the FDA by the Company, (iii) participate on a development committee, and (iv) make available its regulatory consultants, collaborate with any regulatory consulting firms engaged by the Company and participate in all FDA or Drug Enforcement Agency ("DEA") meetings as appropriate and as related to the API. We now refer to the second-generation product as our proprietary formulation or proprietary product and have de-emphasized the first-generation product.

In consideration for these supplies and services, the Company has agreed to purchase exclusively from Purisys during the commercialization phase all API for its Products (as defined in the Development and Supply Agreement) at a pre-determined price subject to certain producer price index adjustments and agreed to Purisys' participation in the economic success of the commercialized Product or Products up to the earlier of the achievement of a maximum dollar amount or the expiration of a period of time.

Transactions with Bausch Health Companies Inc. (formerly known as Biovail Laboratories International SRL)

Beginning in March 2010, the Company entered into a series of asset purchase and license agreements with Biovail Laboratories International SRL which later merged with Valeant Pharmaceuticals International, Inc. which was later renamed Bausch Health Companies Inc. ("Bausch").

In March 2011, the Company entered into a new agreement with Bausch to reacquire the ampakine compounds, patents and rights that Bausch 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 pertaining to an intravenous dosage form of the ampakine compounds for respiratory depression, a therapeutic area not currently pursued by the Company. Bausch 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, Bausch 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 Bausch would share in all such future development costs with the Company. If Bausch makes the co-marketing election, the Company would owe no further milestone payments to Bausch and the Company would be eligible to receive a royalty on net sales of the compound by Bausch or its affiliates and licensees.

There was no activity during the three-months ended and six-months ended June 30, 2021 or 2020 that affect the Bausch agreement.

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 June 30, 2021, aggregating $2,179,870. License agreement amounts included in the 2021 column represents amounts contractually due from July 1, 2021 through December 31, 2021 (six months) and in each of the subsequent years, represents the full year. Employment agreement amounts included in the 2021 column represent amounts contractually due from July 1, 2021 through September 30, 2021 (three months) when such contracts expire unless extended pursuant to the terms of the contracts.

		Payments Due By Year				
	Total	2021	2022	2023	2024	2025
License agreements	$ 585,370	$ 75,000	$ 165,092	$ 115,093	$ 130,185	$ 100,000
Employment agreements (1)	1,594,500	400,200	639,600	554,700	-	-
Total	$ 2,179,870	$ 475,200	$ 804,692	$ 669,793	$ 130,185	$ 100,000

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

9. Subsequent Events

University of Wisconsin-Milwaukee Outreach Services Agreement

On July 12, 2021, the Company and the Board of Regents of the University of Wisconsin System on behalf of the University of Wisconsin-Milwaukee ("UWM") entered into an Outreach Services Agreement pursuant to which UWM agreed to provide, among other molecules, multiple milligram to gram quantities of KRM-II-81 (GABAkine) and the Company agreed to pay UWM an annual sum of $75,000 payable in three installments of $25,000 each beginning October 12, 2021 and on a quarterly basis thereafter. The agreement terminates on June 30, 2022 unless extended upon consent of both parties.

Amendment to Convertible Note

On July 27, 2021, the maturity date of the note scheduled to mature on July 28, 2021 was extended to December 1, 2021 and the original and remaining principal amount of the note was increased by $5,000 from $40,000 to $45,000 and from $15,000 to $20,000 respectively, with interest on the incremental increase in principal amount accruing from the note inception date.

Filing of Form 1-A

On August 9, 2021, the Company filed a Form 1-A Preliminary Offering Statement under Regulation A of the Securities Act with respect to a contemplated Tier 2 offering that may continue for a two-year period. No offering of securities may be made until and unless the offering is qualified by the SEC. The proposed offering is for up to 250,000,000 shares of common stock at a per share offering price of between $0.02 to $0.03, with the exact share price to be set forth by supplement to the Offering Statement, and with gross proceeds not to exceed $7,500,000. On August 12, 2021, the Company received a letter from the SEC informing us that it does not intend to review the Offering Statement, and that upon satisfaction of certain conditions, it will consider qualifying the Offering Statement at the Company's request.

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, as well as the audited consolidated financial statements, notes related thereto, and Management's Discussion and Analysis of Financial Condition and Results of Operations in our 2020 Form 10-K.

Overview

The mission of the Company is to develop innovative and revolutionary treatments to combat disorders caused by disruption of neuronal signaling. We are developing treatment options that address conditions that affect millions of people, but for which there are limited or poor treatment options, including obstructive sleep apnea (OSA), attention deficit hyperactivity disorder ("ADHD"), epilepsy, chronic pain, including inflammatory and neuropathic pain, recovery from spinal cord injury ("SCI"), as well as other areas of interest based on results of preclinical and clinical studies to date.

RespireRx is developing a pipeline of new drug products based on our broad patent portfolios across two distinct drug platforms:

(i) our pharmaceutical cannabinoids platform (which we refer to as ResolutionRx) is developing compounds that target the body's endocannabinoid system, and in particular, the re-purposing of dronabinol, an endocannabinoid CB1 and CB2 receptor agonist, for the treatment of OSA. Dronabinol is already approved by the FDA for other indications.

(ii) our neuromodulators platform (which we refer to as EndeavourRx) is made up of two programs: (a) our AMPAkines program, which is developing proprietary compounds that are positive allosteric modulators ("PAMs") of AMPA-type glutamate receptors to promote neuronal function and (b) our GABAkines program, which is developing proprietary compounds that are PAMs of GABAA receptors, and which was recently established pursuant to our entry with the University of Wisconsin-Milwaukee Research Foundation, Inc., an affiliate of the University of Wisconsin-Milwaukee ("UWMRF"), into a patent license agreement (the "UWMRF Patent License Agreement").

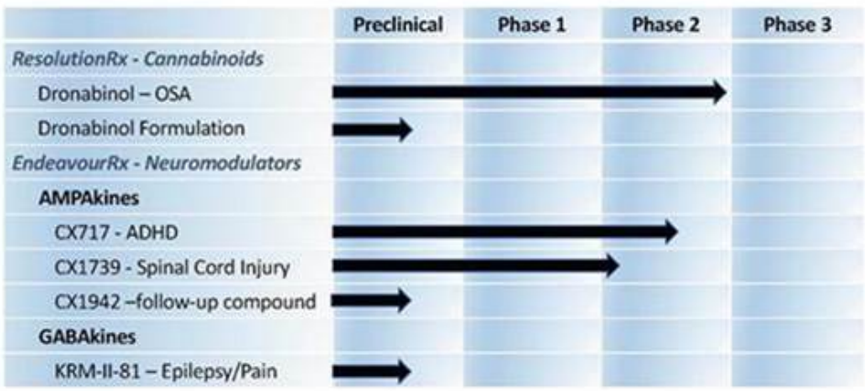
Financing our Platforms

Our major challenge has been to raise substantial equity or equity-linked financing to support research and development plans for our pharmaceutical cannabinoid and neuromodulator platforms, while minimizing the dilutive effect to pre-existing stockholders. At present, we believe that we are hindered primarily by our public corporate structure, our OTCQB listing, and low market capitalization as a result of our low stock price.

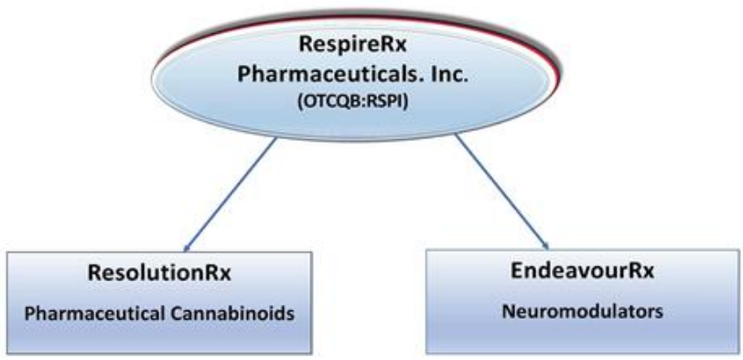
For this reason, the Company has implemented an internal restructuring plan through which our two drug platforms have been reorganized into separate business units and may in the future be organized into subsidiaries of RespireRx. We believe that by creating one or more subsidiaries to further the aims of ResolutionRx and EndeavourRx, it may be possible, through separate finance channels, to optimize the asset values of each. We are also planning to commence, assuming the SEC qualifies the offering, a securities offering pursuant to Regulation A under the Securities Act. See Note 9. Subsequent Events – *Filing of Form 1-A* to the Company's condensed consolidated financial statements at June 30, 2021.

The Company is also involved in business development efforts (licensing/sub-licensing, joint venture and other commercial structures) with a view to securing strategic partnerships that represent strategic and operational infrastructure additions, as well as cash and in-kind funding opportunities. These efforts have focused on, but have not been limited to, engaging with brand and generic pharmaceutical and biopharmaceutical companies as well as companies with potentially useful formulation or manufacturing capabilities, significant subject matter expertise and financial resources. No assurance can be given that any transaction will come to fruition or that if it does, that the terms will be favorable to the Company.

Below is a chart that represents our current development status for each of our product candidates for the disorders for which they are being developed. Preclinical testing is pre-human testing and includes *in vitro* and animal studies. Phase 1 clinical trials are primarily safety, generally conducted in healthy adults. Phase 2 clinical trials are generally somewhat larger than Phase 1 and often include dose finding, additional safety and preliminary efficacy. Phase 3 clinical trials are larger studies designed to test efficacy and safety in a broader population. See "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" in our 2020 Form 10-K for more information on our proposed regulatory approach and development plans for our product candidates.



Below is our current business organization with ResolutionRx and EndeavourRx currently operating as divisions and which are planned to become, initially, wholly-owned subsidiaries.



Technology Rights

University of Illinois License Agreement

See Note 8. Commitments and Contingencies – Significant Agreements and Contracts – *University of Illinois 2014 Exclusive License Agreement* to our condensed consolidated financial statements at June 30, 2021.

UWMRF Patent License Agreement

See Notes 1, 2 and 8 to our condensed consolidated financial statements at June 30, 2021.

Going Concern

See Note 2. Business – *Going Concern* to our condensed consolidated financial statements at June 30, 2021.

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

See Note 2 to the Company's condensed consolidated financial statements at June 30, 2021.

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

See Note 2. Significant Accounting Policies – *Concentration of Credit Risk* to the Company's condensed consolidated financial statements at June 30, 2021.

See Note 8. Commitments and Contingencies – *University of Illinois 2014 Exclusive License Agreement* to the Company's condensed consolidated financial statements at June 30, 2021.

See Note 8. Commitments and Contingencies – *UWMRF Patent License Agreement* to the Company's condensed consolidated financial statements at June 30, 2021.

See Note 9. Subsequent Events - *University of Wisconsin-Milwaukee Outreach Services Agreement* to the Company's condensed consolidated financial statements at June 30, 2021.

Critical Accounting Policies and Estimates

The Company prepared its condensed consolidated financial statements in accordance with GAAP. 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.

Critical accounting policies and estimates are described in the notes to the Company's condensed consolidated financial statements and include:

- Stock-based awards
- Research and Development Costs
- License Agreements
- Patent Costs
- Convertible Notes

See Critical Accounting Policies and Estimates in our 2020 Form 10-K for a complete description.

Results of Operations

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

	Three-Months Ended June 30,		Six-Months Ended June 30,	
	2021	**2020**	**2021**	**2020**
Operating expenses:				
General and administrative, including related parties	$ 426,169	$ 463,739	$ 1,071,545	$ 829,019
Research and development, including related parties	237,828	153,176	392,592	308,466
Total operating expenses	663,997	616,915	1,464,137	1,137,485
Loss from operations	(663,997)	(616,915)	(1,464,137)	(1,137,485)
Gain on warrant exchange,	1,099	-	1,099	
Loss on extinguishment of debt and other liabilities in exchange for equity	-	-	-	(323,996)
Interest expense, including related parties	(151,842)	(190,606)	(231,312)	(331,316)
Foreign currency transaction gain (loss)	2,526)	(8,616)	31,887	29,942
Net loss attributable to common stockholders	$ (812,214)	$ (816,137)	$ (1,662,463)	$ (1,762,855)
Net loss per common share - basic and diluted	$ (0.01)	$ (0.01)	$ (0.02)	$ (0.04)
Weighted average common shares outstanding - basic and diluted	89,832,860	86,606,705	82,212,945	49,320,761

Three-months Ended June 30, 2021 and 2020

Revenues. The Company had no revenues during the three-months ended June 30, 2021 and 2020.

General and Administrative. For the three-months ended June 30, 2021 general and administrative expenses were $426,169, a decrease of $37,570, as compared to $463,739 for the three-months ended June 30, 2020. The decrease is primarily the result of decreases in general legal expenses of $77,654 due to reduced usage of professional services and a decrease of $10,769 in expenses for directors and officers liability insurance ("D&O") premiums as a result of the expiration after June 30, 2020 of the tail component of such D&O coverage, offset by increases in salaries of $39,300 as a result of our President and CEO accruing salary for the full quarter in 2021 in contrast to only a partial quarter in 2020, as well as an increase in accounting services of $37,783 and smaller increases in other categories of general and administrative expenses.

Research and Development. For the three-months ended June 30, 2021, research and development expenses were $237,828, an increase of $84,652, as compared to $153,176 for the three-months ended June 30, 2020. The increase in research and development expenses for the three-months ended June 30, 2021, as compared to the three-months ended June 30, 2020, is primarily due to the increase in expenses with respect to new product formulation development and for quality testing of active pharmaceutical ingredients for anticipated research and development activities.

Research and development expenses included $7,500 of stock-based compensation for the three-months ended June 30, 2021 and $0 for the three-months ended June 30, 2020.

Interest Expense. During the three-months ended June 30, 2021, interest expense was $151,842 as compared to $190,606 for the three-months ended June 30, 2020. The decrease of $38,764 is primarily the result of interest no longer being incurred on convertible notes repaid in full or in part as a result of conversion.

Foreign Currency Transaction (Loss) Gain. Foreign currency transaction gain was $2,526 for the three-months ended June 30, 2021, as compared to a foreign currency transaction loss of $8,616 for the three-months ended June 30, 2020. The foreign currency transaction (loss) gain relates to the $399,774 loan from SY Corporation, made in June 2012, which is denominated in the South Korean Won.

Net Loss Attributable to Common Stockholders. For the three-months ended June 30, 2021, the Company incurred a net loss of $812,214 as compared to a net loss of $816,137 for the three-months ended June 30, 2020.

Six-months Ended June 30, 2021 and 2020

Revenues. The Company had no revenues during the six-months ended June 30, 2021 and 2020.

General and Administrative. For the six-months ended June 30, 2021, general and administrative expenses were $1,071,545, an increase of $242,526, as compared to $829,019 for the six-months ended June 30, 2020. The increase in general and administrative expenses is primarily due to an increase of $314,300 in salaries, primarily due to a $200,000 guaranteed bonus to our President and CEO as well as a full six months of salary and benefits in 2021 compared to a salary for a partial period in the prior year given that our President and CEO had joined the Company in May 2020 and had not accrued a full six months salary. In addition, there was an increase of $54,433 in accounting expenses and $20,437 in transfer agent expenses. These increases were offset by decreases of $120,651 in corporate legal expenses and $10,398 in directors and officers liability insurance ("D&O") premiums as a result of the expiration after June 30, 2020 of the tail component of such D&O coverage.

Research and Development. For the six-months ended June 30, 2021, research and development expenses were $392,592, an increase of $84,126, as compared to $308,466 for the six-months ended June 30, 2020. The increase in research and development expenses for the six-months ended June 30, 2021, as compared to the three-months ended June 30, 2020, is primarily due to the increase in expenses with respect to new product formulation development and for quality testing of active pharmaceutical ingredients for anticipated research and development activities.

Research and development expenses included $15,000 of stock-based compensation for the six-months ended June 30, 2021 and $0 for the six-months ended June 30, 2020.

Loss on Extinguishment of Convertible Debt. There was no loss on extinguishment of debt during the six-months ended June 30, 2021 as compared to a loss on extinguishment of debt of $323,996 for the six-months ended June 30, 2020.

Interest Expense. During the six-months ended June 30, 2021, interest expense was $231,312 as compared to $331,316 for the six-months ended June 30, 2020. The decrease of $100,004 is primarily the result of interest no longer being incurred on convertible notes repaid in full or in part as a result of conversion.

Foreign Currency Transaction (Loss) Gain. Foreign currency transaction gain was $31,887 for the six-months ended June 30, 2021, as compared to a foreign currency transaction gain of $29,942 for the six-months ended June 30, 2020. The foreign currency transaction (loss) gain relates to the $399,774 loan from SY Corporation, made in June 2012, which is denominated in the South Korean Won.

Net Loss Attributable to Common Stockholders. For the six-months ended June 30, 2021, the Company incurred a net loss of $1,662,463 as compared to a net loss of $1,762,855 for the six-months ended June 30, 2020.

Liquidity and Capital Resources – June 30, 2021

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 $1,662,463 for the six-months ended June 30, 2021 and $4,301,210 for the fiscal year ended December 31, 2020, has incurred negative operating cash flows of $688,571 for the six-months ended June 30, 2021 and $513,001 for the fiscal year ended December 31, 2020, had a stockholders' deficiency of $8,816,881 at June 30, 2021, 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, 2020, expressed substantial doubt about the Company's ability to continue as a going concern.

At June 30, 2021, the Company had a working capital deficit of $8,816,881, as compared to a working capital deficit of $8,063,320 at December 31, 2020, reflecting an increase in the working capital deficit of $753,561 for the six-months ended June 30, 2021. This is primarily the result of increases in accounts payable and accrued expenses and accrued compensation reflected in our loss from operations during the six-months ended June 30, 2021. During the fiscal year ended December 31, 2020, there was forgiveness of certain compensation and related benefits by certain executive officers aggregating $1,684,218 in exchange for equity, having the effect of reducing accrued compensation and related benefits by that amount, which did not occur during the six-month period ended June 30, 2021. For more information, see "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations-*Forgiveness of Accrued Compensation and Related Costs*" in our 2020 Form 10-K. In addition, a portion of accounts payable to two vendors totaling $241,109 was exchanged for equity during the fiscal year ended December 31, 2020. No similar exchanges occurred during the six-months ended June 30, 2021.

At June 30, 2021, the Company had cash of $32,056, as compared to $825 at December 31, 2020, reflecting an increase in cash of $31,231 for the six-months ended June 30, 2021.

In general, substantially all of the cash raised in financings during the six-months ended June 30, 2021 and during fiscal year ended December 31, 2020 was utilized to pay general and administrative expenses or the related accounts payable, including, but not limited to, payments to our licensors, our independent registered public accounting firm, our corporate law firm, our patent and intellectual property law firm and for other patent and intellectual property services, our transfer agent, our financial printer and limited cash payments of compensation. Cash was also utilized to pay research and development expenses or the related accounts payable for new product formulation work performed by a contractor with respect to the development of a new proprietary formulation of dronabinol. Cash was also utilized, among other purposes, to make payments

pursuant to directors and officers insurance and other insurance financings and to repay, in part, certain advances made by officers and one vendor and payments of certain outstanding accounts payable.

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 general and administrative and research and development activities from both related and unrelated parties.

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. We are planning to commence, assuming the SEC qualifies the offering, a securities offering pursuant to Regulation A under the Securities Act. See Note 9. Subsequent Events – *Filing of Form 1-A* to the Company's condensed consolidated financial statement at June 30, 2021.

We provide no assurance that this offering will be qualified, or if qualified, would result in a financing on terms or for net proceeds acceptable to the Company. The Company regularly evaluates various other measures to satisfy the Company's liquidity needs, including development and other agreements with collaborative partners and, when necessary, seeks to exchange or restructure the Company's outstanding securities. The Company is evaluating certain changes to its operations and structure to facilitating 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.

Operating Activities. For the six-months ended June 30, 2021, operating activities utilized cash of $688,571, as compared to utilizing cash of $106,448 for the six-months ended June 30, 2020, to support the Company's ongoing general and administrative expenses as well as its research and development activities.

Financing Activities. For the six-months ended June 30, 2021, financing activities consisted of net proceeds from convertible note financings of $541,050 net of original issue discounts and note costs, sales of common stock pursuant to an equity line of $117,299 and $66,453 with respect to financing of a new directors and officers insurance policy, offset by a $5,000 partial repayment of an officer advance.

Principal Commitments

Employment Agreements

See Note 8. Commitments and Contingencies – Significant Agreements and Contracts – *Employment Agreements* to our condensed consolidated financial statements at June 30, 2021.

University of Illinois 2014 Exclusive License Agreement

See Note 8. Commitments and Contingencies – Significant Agreements and Contracts – *University of Illinois 2014 Exclusive License Agreement* to our condensed consolidated financial statements at June 30, 2021.

UWM Research Foundation Patent License Agreement

See Note 8. Commitments and Contingencies – Significant Agreements and Contracts, *UWM Research Foundation Patent License Agreement* to our condensed consolidated financial statements at June 30, 2021.

University of Wisconsin-Milwaukee Outreach Services Agreement

See Note 9. Subsequent Events - *University of Wisconsin-Milwaukee Outreach Services Agreement* to our condensed consolidated financial statements at June 30, 2021.

A table setting forth the Company's principal cash obligations and commitments for the next five fiscal years as of June 30, 2021, aggregating $2,179,870, is set forth in Note 8. Commitments and Contingencies – *Summary of Principal Cash Obligations and Commitments.*

Off-Balance Sheet Arrangements

At June 30, 2021, 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 by 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.

Management 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 to allow timely decisions regarding required disclosure. Although the senior executive team has been developing more formalized and regular communication and collaboration processes, thereby improving the control environment, these controls and procedures are not yet sufficient to remediate the Company's control weaknesses. The Company is 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 established adequate internal controls over financial reporting.

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. In addition, as conditions change over time, so too may the effectiveness of internal controls. However, management believes that the financial information included in this Quarterly Report on Form 10-Q 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

We are periodically subject to various pending and threatened legal actions and claims. See Note 8. Commitments and Contingencies – *Pending or Threatened Legal Actions and Claims* to our condensed consolidated financial statements at June 30, 2021 for details regarding these matters.

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 2020 Form 10-K. The Risk Factors set forth in the 2020 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 2020 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

There were no unregistered sales of equity securities during the six-months ended June 30, 2021 that were not disclosed by the Company on a Current Report on Form 8-K. In connection with previously reported unregistered sales of warrants and convertible notes, there was a cashless exercise of warrants as described in Note 6. Stockholders' Deficiency – *Common Stock*, and there were conversions of convertible notes inclusive of accrued interest as disclosed in Note 4. Notes Payable – *Convertible Notes Payable* of our condensed consolidated financial statements at June 30, 2021.

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, 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 SY Corporation has not issued a notice of default or a demand for repayment. The Company 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 six-months ended June 30, 2021, there were no further communications between the Company and SY Corporation.

The note payable to SY Corporation consists of the following at June 30, 2021 and December 31, 2020:

	June 30, 2021	December 31, 2020
Principal amount of note payable	$ 399,774	$ 399,774
Accrued interest payable	435,174	411,384
Foreign currency transaction adjustment	21,138	53,393
	$ 856,086	$ 864,551

Interest expense with respect to this promissory note was $23,789 and $23,921 for the six-months ended June 30, 2021 and 2020, respectively and $11,960 for the three-months ended June 30, 2021 and 2020, respectively.

Default on Convertible Notes Payable

As of June 30, 2021, principal and accrued interest on the Original Convertible Note that is subject to a default notice totaled $51,111, of which $26,111 was accrued interest. See Note 4. Notes Payable – *Convertible Notes Payable* for more information.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

The information below is reported in lieu of information that would be reported under Items 1.01 and 2.03 under Form 8-K.

Placement Agent Agreement

On August 6, 2021, the Company entered into an investment banking agreement ("PA Agreement") with Primary Capital LLC ("PC"), pursuant to which PC will act as the Company's exclusive placement agent for a twelve-month period beginning August 2, 2021, in connection with a contemplated best-efforts securities offering under Regulation A of the Securities Act ("Reg A Offering"). The PA Agreement calls for PC to provide additional investment banking services, both related to the Reg A Offering and independent of the Reg A Offering. The PA Agreement calls for cash fees payable to PC equal to 7% of the gross proceeds from the Reg A Offering associated with investors originated by PC and 4% of the gross proceeds from the Reg A Offering associated with investors originated by the Company. In addition, the PA Agreement calls for fees payable as warrants equal to 7% of that number of shares of the Company's common stock with respect to investors originated by PC and 4% for investors originated by the Company. The PA Agreement also provides for a 7% cash and 7% warrant fee for PC-originated investors in any non-Reg A Offering of securities and a cash fee of 5% of the transaction value at the closing of a sale or merger or acquisition transaction. This PA Agreement supersedes all prior contemporaneous negotiations, commitments, agreements and writings with respect to the subject matter of the PA Agreement. The foregoing description of the PA Agreement does not purport to be complete and is qualified in its entirety by reference to the PA Agreement, a copy of which is attached to this report as Exhibit 99.1.

The Company filed a Form 1-A Preliminary Offering Statement with the SEC on August 9, 2021. The SEC has not yet qualified the Reg A Offering. See Note 9. Subsequent Events – *Filing of Form 1-A* to the Company's condensed consolidated financial statements as of June 30, 2021.

ITEM 6. EXHIBITS

INDEX TO EXHIBITS

The following documents are filed as part of this report:

Exhibit Number	Description of Document
10.1	Securities Purchase Agreement, dated April 30, 2021, between RespireRx Pharmaceuticals Inc. and Labrys Fund, L.P. (incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K (file no. 1-16467) filed May 3, 2021).
10.2	Piggy-Back Registration Rights Agreement, dated April 30, 2021, between RespireRx Pharmaceuticals Inc. and Labrys Fund, L.P. (incorporated by reference to Exhibit 99.2 of the Company's Current Report on Form 8-K (file no. 1-16467) filed May 3, 2021).
10.3	10% Convertible Note, dated April 30, 2021 (incorporated by reference to Exhibit 99.3 of the Company's Current Report on Form 8-K (file no. 1-16467) filed May 3, 2021).
10.4	Common Stock Purchase Warrant, dated April 30, 2021 (incorporated by reference to Exhibit 99.4 of the Company's Current Report on Form 8-K (file no. 1-16467) filed May 3, 2021).
10.5	Securities Purchase Agreement, dated May 10, 2021, between RespireRx Pharmaceuticals Inc. and LGH Investments, LLC (incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K (file no. 1-16467) filed May 14, 2021).
10.6	Piggy-Back Registration Rights Agreement, dated May 10, 2021, between RespireRx Pharmaceuticals Inc. and LGH Investments, LLC (incorporated by reference to Exhibit 99.2 of the Company's Current Report on Form 8-K (file no. 1-16467) filed May 14, 2021).
10.7	10% Convertible Note, dated May 10, 2021 (incorporated by reference to Exhibit 99.3 of the Company's Current Report on Form 8-K (file no. 1-16467) filed May 14, 2021).
10.8	Common Stock Purchase Warrant, dated May 10, 2021 (incorporated by reference to Exhibit 99.4 of the Company's Current Report on Form 8-K (file no. 1-16467) filed May 14, 2021).
10.9	Securities Purchase Agreement, dated June 29, 2021, between RespireRx Pharmaceuticals Inc. and EMA Financial, LLC (incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K (file no. 1-16467) filed July 6, 2021).
10.10	Piggy-Back Registration Rights Agreement, dated June 29, 2021, between RespireRx Pharmaceuticals Inc. and EMA Financial, LLC (incorporated by reference to Exhibit 99.2 of the Company's Current Report on Form 8-K (file no. 1-16467) filed July 6, 2021).
10.11	10% Convertible Note, dated June 29, 2021 (incorporated by reference to Exhibit 99.3 of the Company's Current Report on Form 8-K (file no. 1-16467) filed July 6, 2021).
10.12	Common Stock Purchase Warrant, dated June 29, 2021 (incorporated by reference to Exhibit 99.4 of the Company's Current Report on Form 8-K (file no. 1-16467) filed July 6, 2021).
10.13	Exchange Agreement, dated June 28, 2021, between RespireRx Pharmaceuticals Inc. and EMA Financial, LLC (incorporated by reference to Exhibit 99.5 of the Company's Current Report on Form 8-K (file no. 1-16467) filed July 6, 2021).
10.14	Common Stock Purchase Warrant, dated June 28, 2021 (incorporated by reference to Exhibit 99.6 of the Company's Current Report on Form 8-K (file no. 1-16467) filed July 6, 2021).
10.15	Exchange Agreement, dated June 30, 2021, between RespireRx Pharmaceuticals Inc. and FirstFire Global Opportunities Fund LLC (incorporated by reference to Exhibit 99.8 of the Company's Current Report on Form 8-K (file no. 1-16467) filed July 6, 2021).

10.16	Common Stock Purchase Warrant, dated June 30, 2021 (incorporated by reference to Exhibit 99.9 of the Company's Current Report on Form 8-K (file no. 1-16467) filed July 6, 2021).
99.1	Placement Agent Agreement, dated August 6, 2021, by and between Primary Capital LLC and RespireRx Pharmaceuticals Inc. (incorporated by reference to Exhibit 1.1 of the Company's Offering Statement on Form 1-A (file no. 24-11602) filed August 9, 2021).
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*	iXBRL Instance Document
101.SCH*	iXBRL Taxonomy Extension Schema Document
101.CAL*	iXBRL Taxonomy Extension Calculation Linkbase Document
101.LAB*	iXBRL Taxonomy Extension Label Linkbase Document
101.PRE*	iXBRL Taxonomy Extension Presentation Linkbase Document
101.DEF*	iXBRL Taxonomy Extension Definition Linkbase Document
104*	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101.INS)

* Filed herewith.

** Furnished herewith.

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: August 16, 2021

By: */s/ Timothy Jones*
Timothy Jones
President and Chief Executive Officer

Date: August 16, 2021

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

EXHIBIT 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
UNDER SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Timothy Jones, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of RespireRx Pharmaceuticals Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)), for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's Board of Directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 16, 2021

By: */s/ Timothy Jones*
Timothy Jones
President and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
UNDER SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Jeff Eliot Margolis, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of RespireRx Pharmaceuticals Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)), for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's Board of Directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 16, 2021

By: */s/ Jeff Eliot Margolis*
Jeff Eliot Margolis
Chief Financial Officer

EXHIBIT 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
UNDER SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Timothy Jones, the Chief Executive Officer of RespireRx Pharmaceuticals Inc. (the "Company"), certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that:

(i) The Quarterly Report on Form 10-Q of the Company for the quarterly period ended June 30, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934; and

(ii) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Date: August 16, 2021

By: */s/ Timothy Jones*
Timothy Jones
President and Chief Executive Officer

EXHIBIT 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
UNDER SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Jeff Eliot Margolis, the Chief Financial Officer of RespireRx Pharmaceuticals Inc. (the "Company"), certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that:

(i) The Quarterly Report on Form 10-Q of the Company for the quarterly period ended June 30, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934; and

(ii) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Date: August 16, 2021

By: */s/ Jeff Eliot Margolis*
Jeff Eliot Margolis
Chief Financial Officer